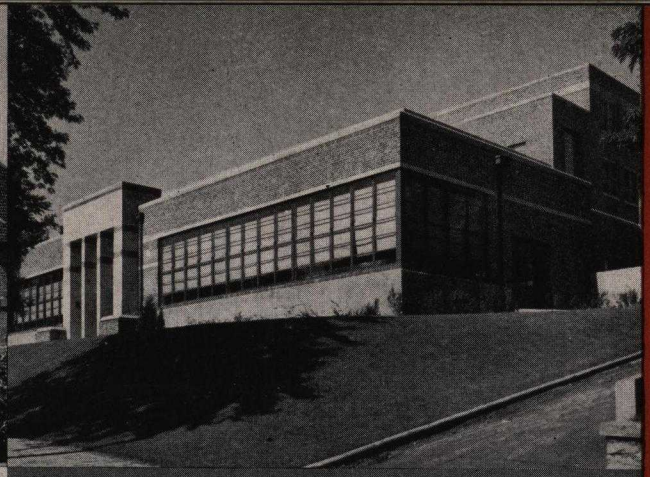

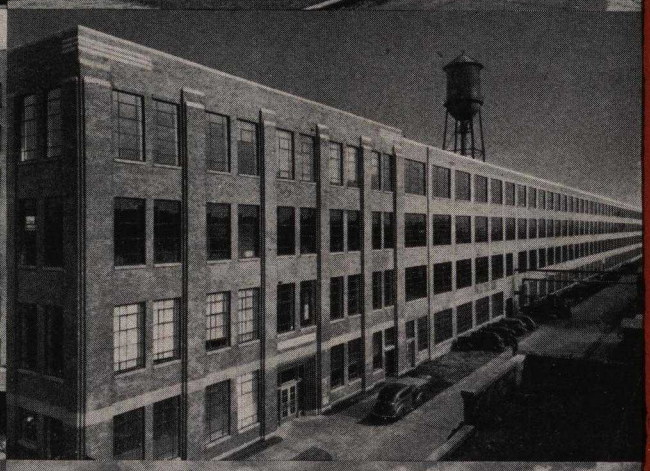

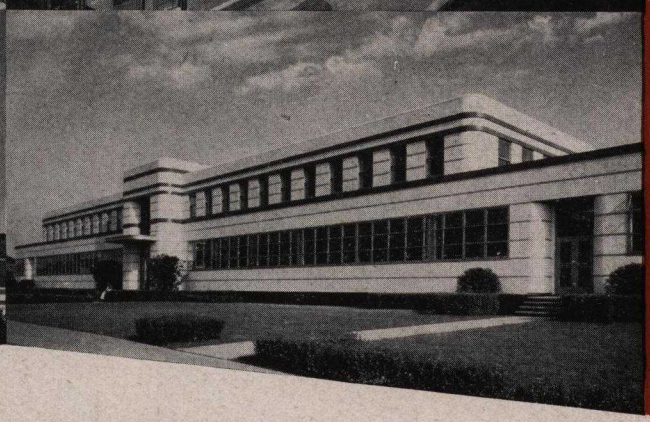

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METAL WINDOW INSTITUTE · MEMBER ·

CECO

METAL WINDOWS AND DOORS

Ceco Steel Products Corporation

1947

A. I. A. File No. 16e

ENGINEERING MAKES THE BIG DIFFERENCE IN CECO CONSTRUCTION PRODUCTS

CECO WINDOWS AND DOORS

CECO OFFERS A COMPLETE LINE OF QUALITY PRODUCTS—This catalog deals specifically with Ceco Steel Windows, Doors and Mechanical Operators.

The Ceco organization also offers to the construction industry a complete line of related products. Ceco's 34 years of experience, its standard of rigid inspection and fine quality materials stand behind every one of these products.

WIDE RANGE AND ADAPTABILITY FOR EVERY TYPE OF BUILDING—The Ceco line is so complete and so flexible that every type of building, from the small residence to the largest commercial or institutional building, may be equipped with Ceco Steel Windows, Doors and other Ceco Products.

WE SHALL BE HAPPY TO COOPERATE WITH YOU—You are invited to utilize the Ceco design, engineering and manufacturing facilities.

Ceco engineers, backed by years of practical experience, are always ready to help you. You will find their construction "know how" of benefit in speeding your job to completion.

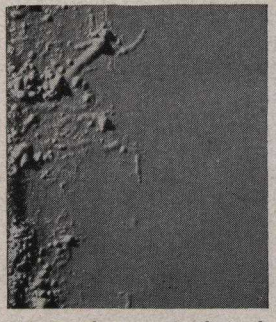
CECO BRANCHES ARE STRATEGICALLY LOCATED FOR PROMPT SERVICE—(See Back Cover)—The Ceco organization fully appreciates the importance of prompt delivery of materials to any project. For that reason, Ceco manufacturing facilities have been constantly expanded to assure adequate service. Branch warehouses and sales offices are strategically located throughout the United States for your convenience.

BONDERIZING for Protection Against Rust

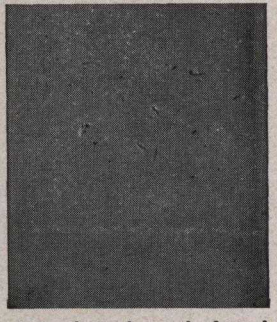
Twin causes of increased maintenance costs are corrosion of metal surfaces underlying paint and the lack of sufficient bond between the paint and the metal itself. The "Bonderizing" process now offered by Ceco gives protection against these problems of paint failure and rust on metal surfaces that are subjected to severe exposure.

In the "Bonderizing" process, a phosphate coating is produced on the metal surface. This coating, known as "Bonderite," is a crystalline structure integral with the metal. Bonderite forms an effective barrier against moisture because it is insoluble in water. In addition, the countless interstices between the microscopic crystals permit paint to penetrate and form strong "keys." The result is a durable, weatherproof surface.

Bonderizing is now standard for all Ceco window products with the exception of doors. The following paragraph should always be included under painting specifications:



A panel not Bonderized, after six months of sub-tropical atmosphere.



A Bonderized panel of steel after exposure to six months of sub-tropical atmosphere.

BONDERIZING—After fabrication, a clean, grease-free surface for chemical treatment shall be provided by thoroughly cleaning windows in a hot alkali solution to remove all oil, grease, and foreign matter. The windows shall then be rinsed in hot water and processed by Bonderizing.

This shall be followed by a rinse in cold water and then a rinse in a dilute solution of chromic acid. The windows shall then be immediately dried and brought to a uniform temperature proper for painting. Paint shall be of a character especially adapted to materials coated with phosphates. Paint shall be a part of the continuous process. Windows shall be oven dried for at least 30 minutes at a temperature of not less than 300 degrees.

REVISIONS in POST WAR STANDARDS

In 1944 members of The Metal Window Institute abandoned the former standard 12/18″ and 14/20″ glass size dimensions for industrial windows. The short experience with the new standards based on dimensional coordination has indicated that certain minor revisions would further increase the advantages arising through this change. These changes are as follows:

1. For installation details the high quality practices originally recommended as standard are not always essential for satisfactory window operation on industrial projects. Therefore, other less expensive but fully practical installation details are offered as alternate choices.

2. A standard mullion width of 3⅛″ (4″ grid dimensions) is adopted and shown. The variable dimension of 2⅛″ to 3⅛″ is still available but not shown for standard opening layouts.

3. The two former widths of 3′4⅞″ and 4′0⅞″ are discontinued in fixed, pivoted, commercial projected and security windows and a new width of 3′8⅞″ is substituted. This results in a simpler and more practical series of sizes for industrial construction.

4. In Intermediate Projected and Architectural Projected windows, all one light high projected out ventilators are increased to two lights in height. Also a new series 9′5″ in height is added.

5. The previous standard dimension of 2′7⅝″ for single-vented two-light-wide casements has been discontinued and a new dimension of 3′1″ has been substituted which parallels the popular prewar size of 3′1¾″ for this type of casement unit. Experience has proven that the demand for this slight extra width justifies the change.

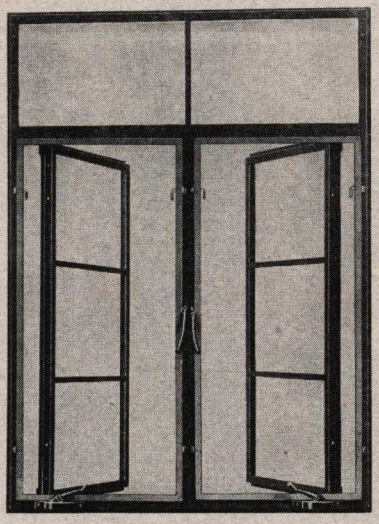
RESIDENCE CASEMENTS

SPECIFICATIONS

GENERAL—All windows shall be the Residence Type Casements as manufactured by the Ceco Steel Products Corporation of Chicago, Illinois, or approved equal, as per written approval of the architect and shall be of sizes and types as shown on architect's drawings.

MATERIAL—All sections shall be especially designed, hot-rolled, new billet steel. All frame and ventilator members shall be special Z shaped sections and shall be of 1 1/16" depth from front to back and not less than 1/8" in thickness. Frame shall be 1 1/16" x 7/8" Z shaped section for direct attachment to wood construction or other type construction with fins.

Ventilator members shall be 1 1/16" x 3/4" x 9/16" Z shaped sections and shall be rolled with a baffle providing a continuous two point weathering contact, with frame members, throughout the entire perimeter of the ventilator without the aid of loose or applied linings. Corners of frame and ventilator members shall be mitred and electrically butt welded, with exposed surfaces at welds dressed to a smooth finish. All muntins shall be special rolled T's with 5/8" face and a depth of 7/8" and shall be continuous between rails and stiles. Head Drips shall be specially formed members.



Flexibility in the design of CECO Steel Casements meets the modern demand of architects for distinction and close harmony in the appearance of the building.

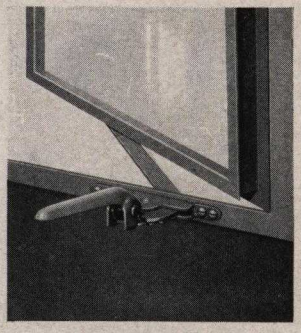
CONSTRUCTION—A continuous drip shall be provided at transom bar and at head of all openings where the swing leaves extend the full height of the opening. Horizontal and vertical mullions shall be provided where necessary, to be of hot-rolled T shape members. Side hinged ventilators to open out shall be hung on extension cleaning hinges of mild rolled steel sections. Hinge leaves shall be securely welded to frame and ventilator. All casements shall be prepared for the standard application of screens.

HARDWARE—All unattached hardware shall be packed and shipped separately to prevent damage and shall be applied after erection. Hardware shall be Roto or Lever type. (Architect to specify which type is required.) Hardware shall control the ventilator independently of the screen. Roto or Lever hardware shall securely hold the ventilator in open position. The Roto operator shall be die cast with bronze lacquer finish. (Solid bronze hardware with polished finish may be obtained at slight extra cost.) The Lever type operator shall be pressed steel with bronze lacquer finish. Operator arms shall be cadmium plated (locking handle keeper and channel guide for operator shall be attached in shop). For side-hinged ventilators die cast, bronze lacquer finish cam action locking handles shall be furnished. All hardware shall be attractively and accurately designed for operation required.

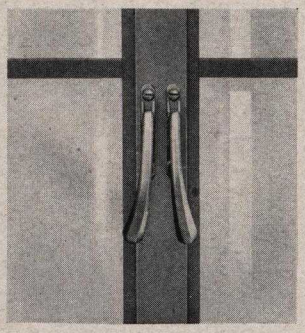
BONDERIZING and PAINTING — All casements shall be Bonderized and receive one coat of gray paint oven-dried before shipment.

GLAZING—Windows shall be designed for glazing from the outside with spring wire glazing clips and steel casement putty. Glass, putty, glazing clips and glazing by others.

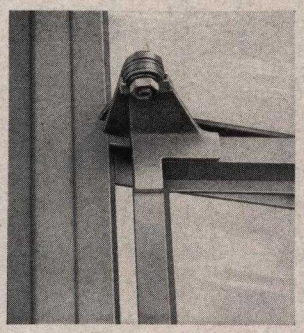
SCREENS—All screens shall be especially designed for use with Residence Casements as manufactured by the Ceco Steel Products Corporation. Screens for the Roto or Lever type casements shall be the flat fixed type. All screens shall be easily attached or removed from the inside. (**Note**: For complete information on screens, see File Index.)



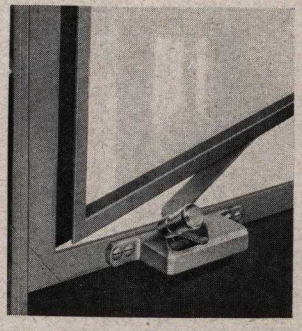
Lever Type (Under-screen) Operator.



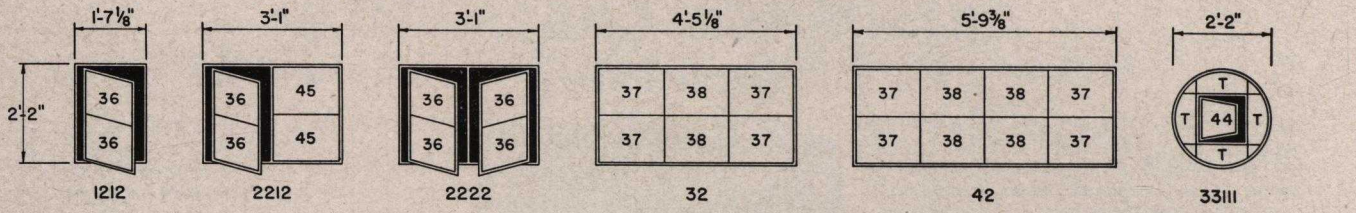
Locking Handle Roto Casement.

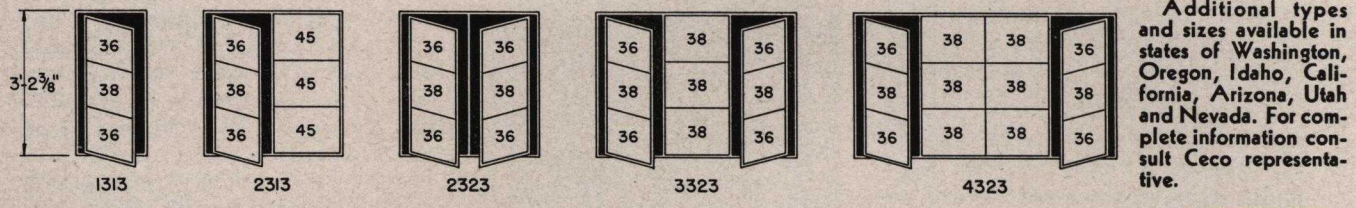


Extension Cleaning Hinge (Friction or Non-friction). Friction type illustrated.

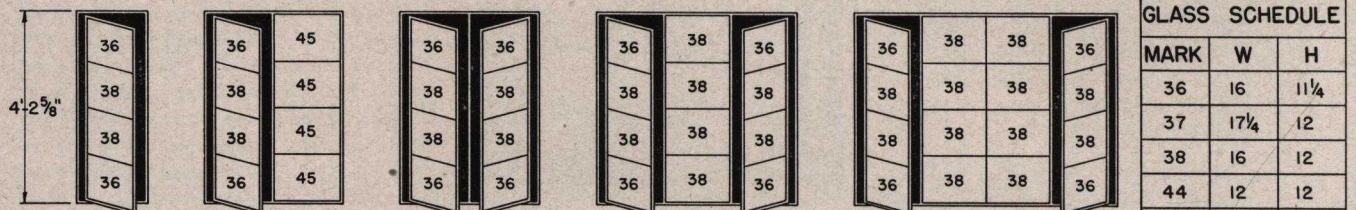


Roto Type (Under-screen) Operator.

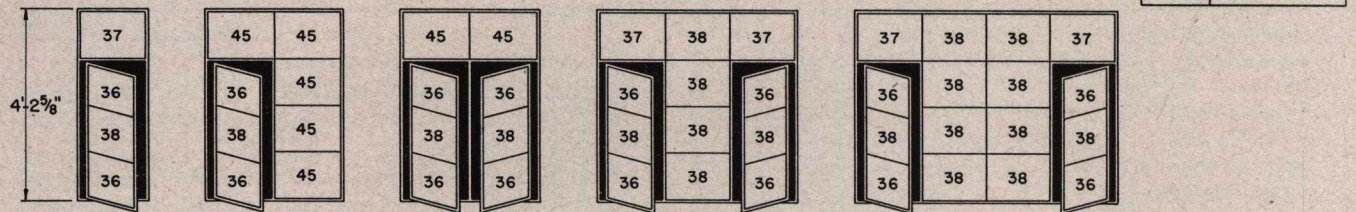


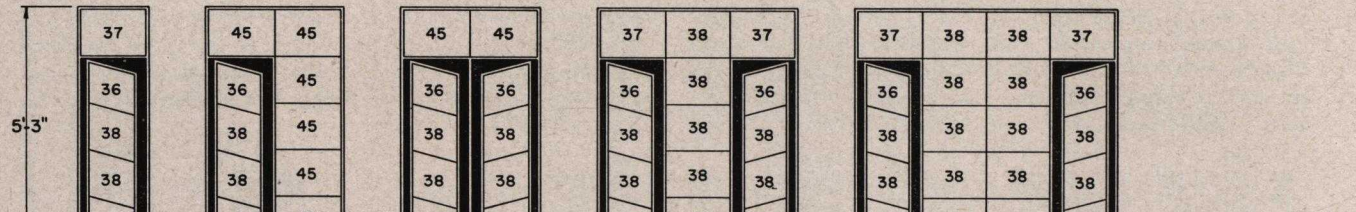


Additional types and sizes available in states of Washington, Oregon, Idaho, California, Arizona, Utah and Nevada. For complete information consult Ceco representative.



GLASS SCHEDULE		
MARK	W	H
36	16	11¼
37	17¼	12
38	16	12
44	12	12
45	17½	12
T	TEMPLATE	





ALL VENTILATED TYPES SHOWN ARE FURNISHED IN FIXED TYPES.

All ventilators swing out and are furnished with either Lever or Roto type underscreen hardware, permitting the opening of the screened window without touching screens.

Sizes shown are window dimensions. For opening dimensions of single units add ¼". When more than one unit is used for a multiple window opening add actual unit dimensions plus ¼" for each mullion used, and ¼" to total thus determined.

Indicate by suffix L or R whether ventilators are left or right hand. All casements are viewed from outside. Handing is determined by location of hinges. A left hand casement will have hinges on left when viewed from outside.

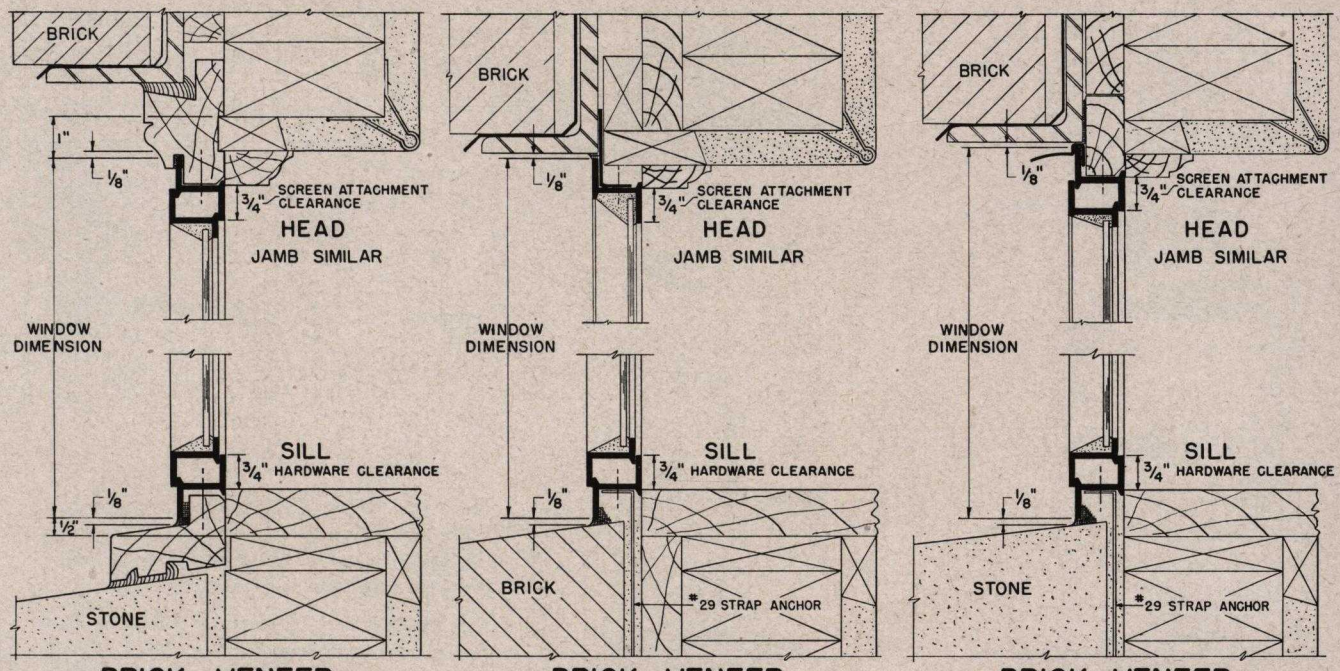
All windows to be set in mastic furnished by window erector.

Units shown are standard warehouse types in fixed and ventilated types. Vertical muntins will be furnished at slight extra cost, but as factory shipment only.

(SEE INSTALLATION DETAILS)

Types and sizes approved by METAL WINDOW INSTITUTE

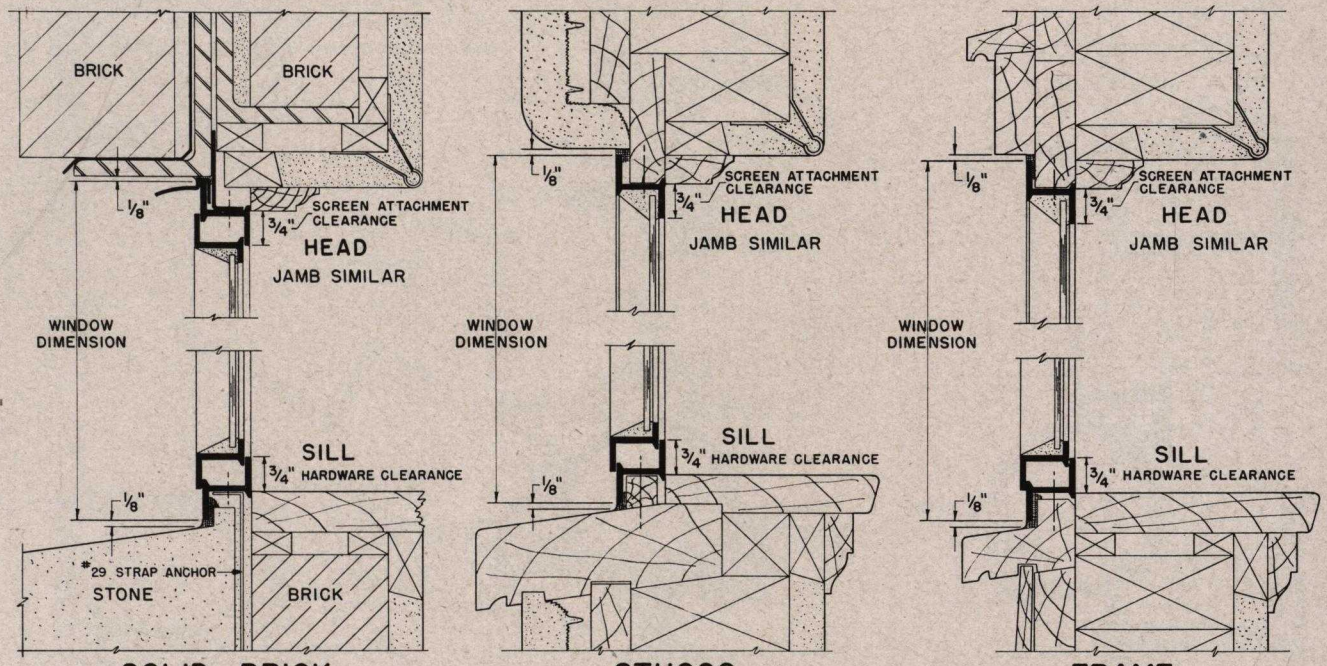
ENGINEERING MAKES THE BIG DIFFERENCE IN CECO CONSTRUCTION PRODUCTS



BRICK VENEER WOOD SURROUNDS

BRICK VENEER WITH FINS

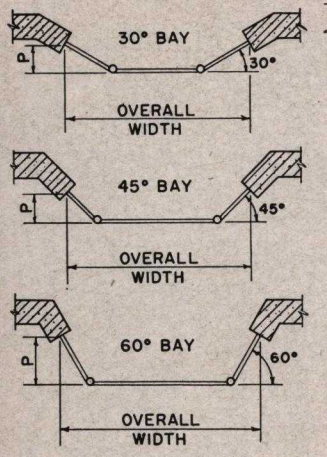
BRICK VENEER WOOD STRIP



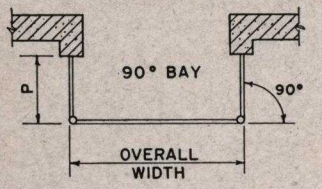
SOLID BRICK WITH FINS

STUCCO WOOD STRIP

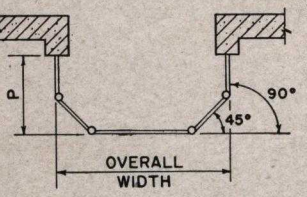
FRAME WOOD STRIP



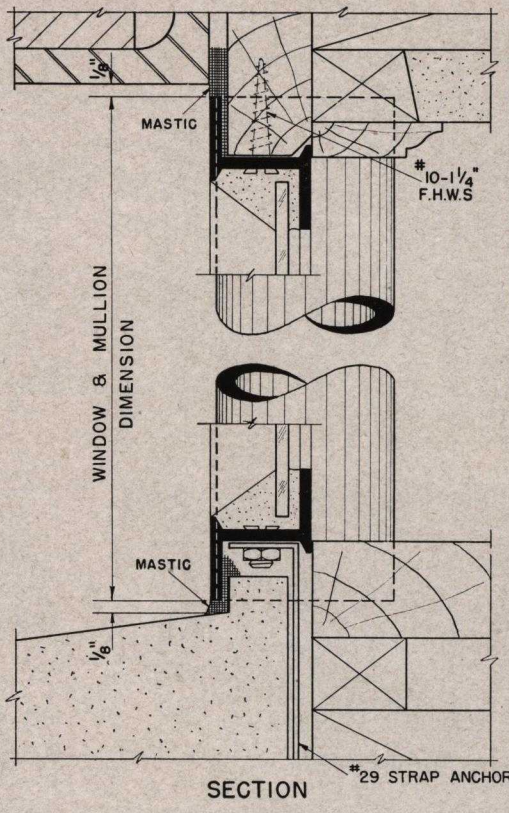
SPLAYED BAYS



SQUARE BAY



SQUARE SPLAYED BAY



SECTION

ANGLE OF BAY	LIGHTS IN RETURN	OVERALL WIDTH LIGHTS IN FRONT SECTION 2	3	4	PROJECTION	DIM. "A"
30°	1	6'-1 1/8"	7'-5 1/4"	8'-9 1/2"	10"	3/4"
	2	8'-8 1/8"	10'-0 1/4"	11'-4 1/2"	1'-6 7/8"	
45°	1	5'-7 1/4"	6'-11 3/8"	8'-3 5/8"	1'-2 1/4"	7/8"
	2	7'-8 1/2"	9'-0 5/8"	10'-4 7/8"	2'-2 7/8"	
60°	1	4'-11 1/4"	6'-3 3/8"	7'-7 5/8"	1'-5 1/2"	1"
	2	6'-5 1/8"	7'-9 1/4"	9'-1 1/2"	2'-9"	
90°	1	3'-4"	4'-8 1/8"	6'-0 3/8"	1'-8 3/4"	1 1/2"
	2	3'-4"	4'-8 1/8"	6'-0 3/8"	3'-2 5/8"	
SQUARE SPLAYED	1	5'-8 1/4"	7'-0 3/8"	8'-4 5/8"	2'-10 7/8"	7/8"
	2	7'-9 1/2"	9'-1 5/8"	10'-5 7/8"	5'-5 3/8"	

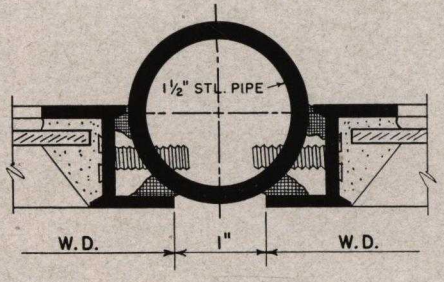
NOTES

Standard Mullions furnished by CECO are no to be used as support members. Load bearing Mullions are to be of proper size to carry the load using top and bottom plates.

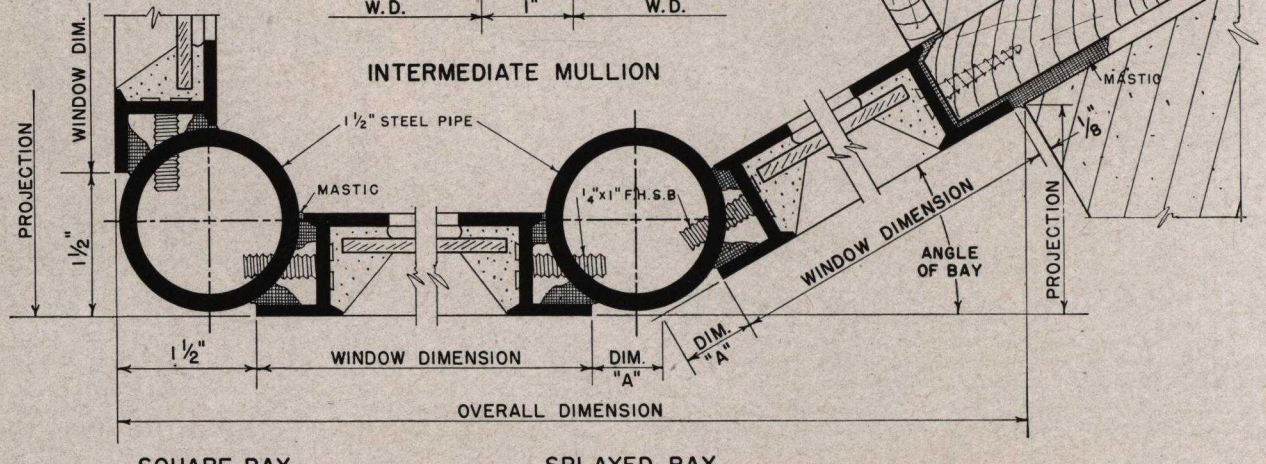
Pipe mullions must be prepared in field by window erector to receive windows.

Mastic where indicated to be furnished by window erector.

Dimensions for 2 light windows in table are based upon using single vented units in returns and double vented units in front section.

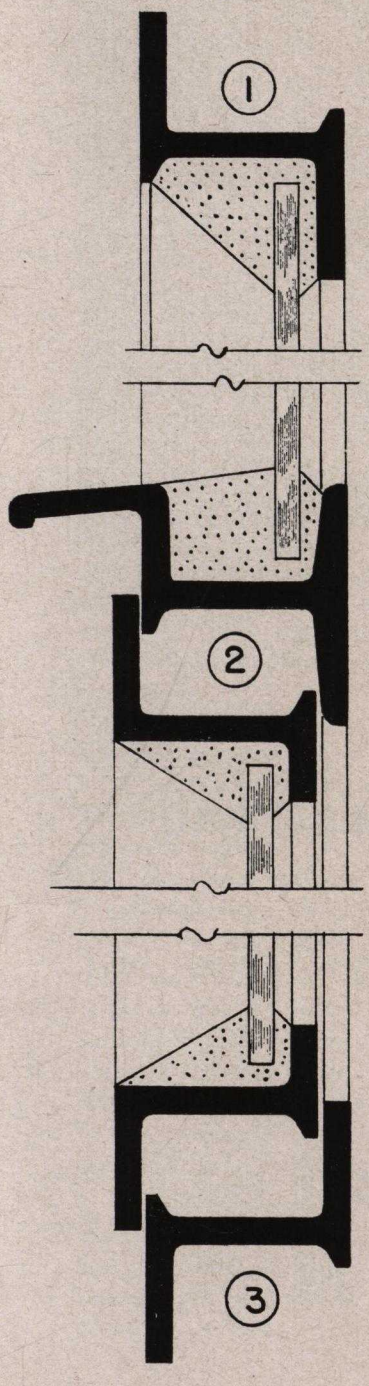


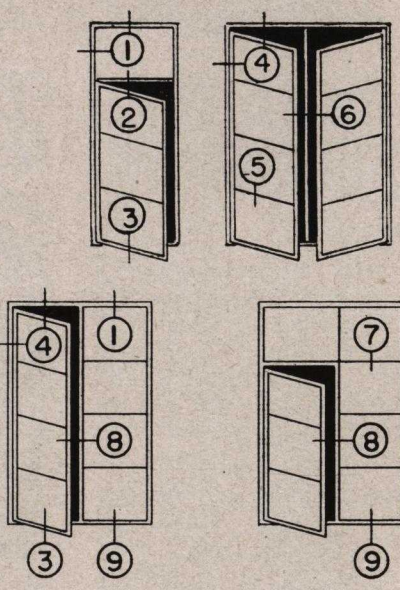
INTERMEDIATE MULLION

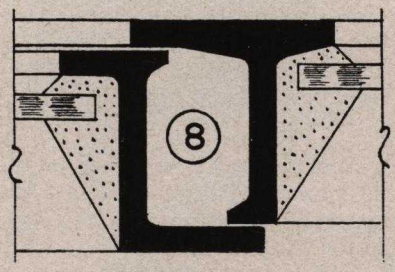


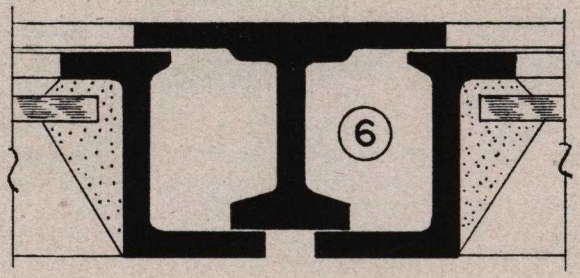
SQUARE BAY SPLAYED BAY

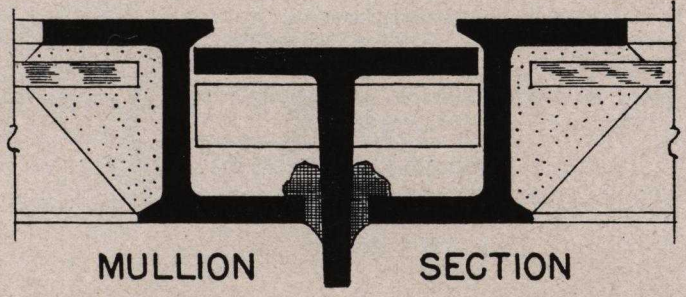
FRAME SECTION FOR WOOD CONSTRUCTION



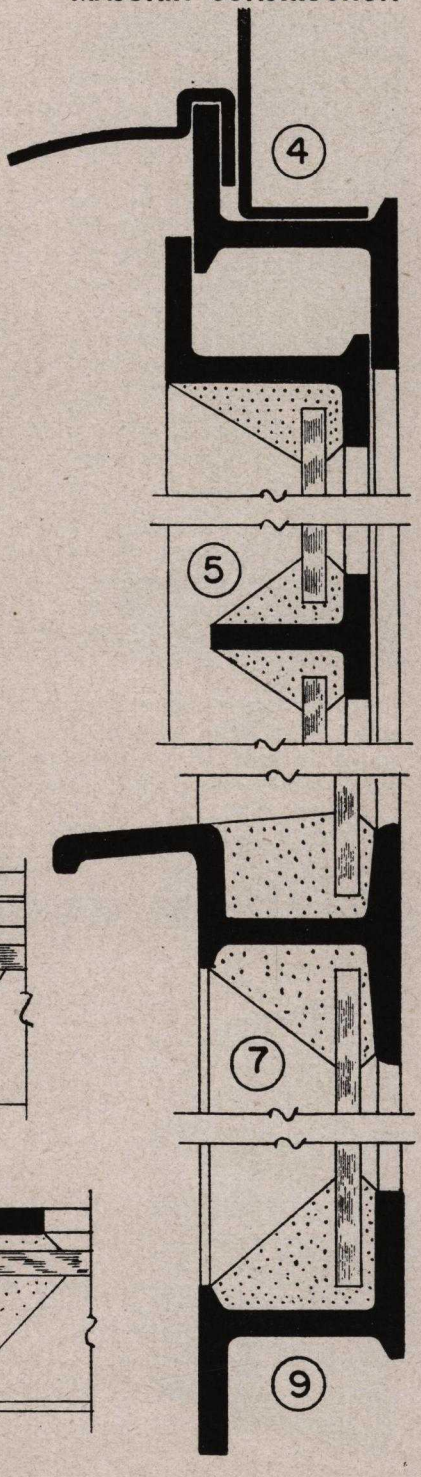








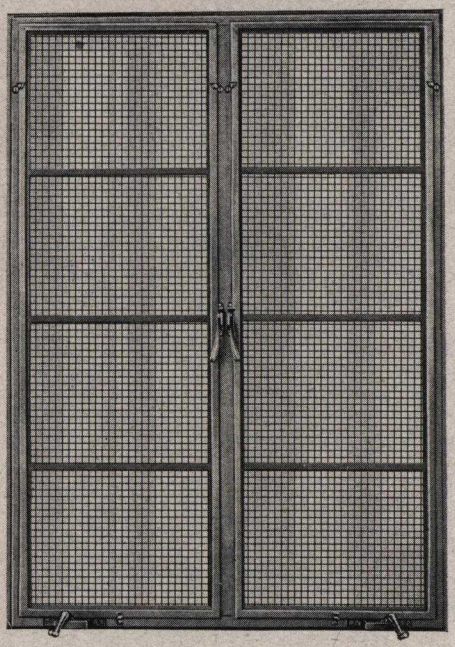
FRAME SECTION FOR MASONRY CONSTRUCTION



RESIDENCE CASEMENTS

FULL SIZE SECTIONS THROUGH WINDOWS

SCREENS FOR RESIDENCE CASEMENTS



Ceco offers a complete line of metal frame screens in steel, aluminum or bronze for attachment to various types of casements. These screens are manufactured in Ceco's Chicago plant and are supplied with bronze, aluminum or galvanized wire cloth in standard or special meshes as specified. (For complete information see the File Index.)

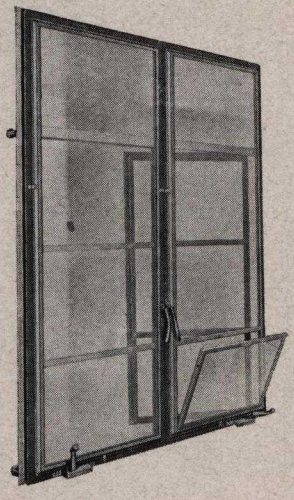
Screens for Roto or Lever Type Casements are easily attached to the inside of the window with inconspicuous and conveniently located clips. A separate screen is furnished for each ventilator which may be removed or replaced very easily. This flat fixed screen does not interefere with the operation of the ventilator and the windows can easily be opened and closed by the use of the Roto or Lever Type hardware without touching the screen. There is no interference with shades or draperies.

Screen cloth is held in place with rewirable spline. Standard screen cloth is either 18 x 14 mesh or 16 x 16 mesh. Screens are shipped with a baked on finish.

For economy and ease of operation the wicket type screen is recommended for use with Housing Casements. A sliding wicket allows ample room to reach the window hardware for the opening and closing of the ventilator. Convenient attachments are furnished which permit easy removal of the entire screen for window cleaning and other purposes.

Frames are made of an open section steel construction with flanges sufficiently large enough to clear ventilator hardware. A rod type spline is used in both the frame and wicket sections making the entire screen rewirable. (Wicket type not illustrated.)

STORM WINDOWS FOR RESIDENCE CASEMENTS

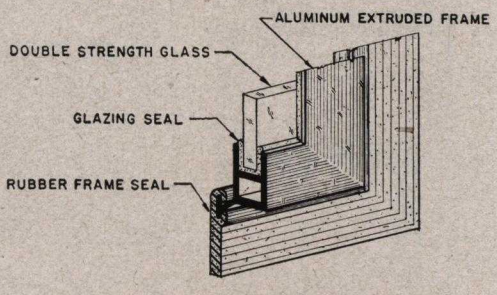


Ceco storm windows are manufactured of specially designed aluminum frame sections, completely assembled and glazed with double strength glass at the factory. Rubber weathering seal is also furnished.

Storm window units are provided for fixed side lights, transoms and operated ventilators to give complete coverage of glass and steel. This complete coverage affords heat conservation, prevents condensation.

Ventilators permitting controlled ventilation are available as illustrated at left. If desired, they must be ordered with the storm windows.

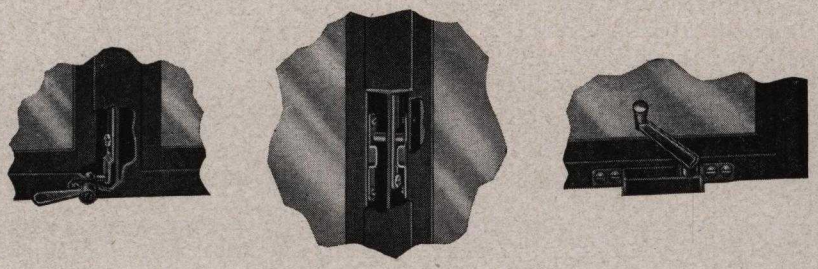
Casements will be prepared for storm windows at the factory only when storm windows are ordered with the casements.



CECO STREAMLINED HARDWARE

CECO STEEL PRODUCTS CORPORATION provides a simple, convenient concealed locking device used with Roto (underscreen operators) Casements, which eliminates the use of locking handles at the meeting rail. The ventilators are locked in position by an ingenious concealed locking bar which engages the keepers. The advantages of this arrangement are numerous. On double vented casements where vents are adjacent to each other, only one screen with uninterrupted screen cloth is required where generally two screens are furnished. Hence, considerable saving in material cost is effected and the subsequent saving in storage, handling, etc. In case of winter windows or storm sash, fewer panels are required because of freedom from interference of handles. Therefore, again savings on material and subsequent costs are effected.

This type of lock replaces the typical locking handles for vents which make screening and blinding inconvenient and expensive. The convenience of this hardware is obvious where stool lines are high and window installations are above normal reach, such as over sinks. This new hardware may be substituted for the standard locking handle used with Roto Casements at no increased cost, if specified.



A flat sliding bolt lock operates in the frame channel from the sill. Installation is simple and the action is positive.

Include the following additional paragraph in your specifications for Casements as now shown on page 3 of this catalog, under "Hardware":

"All double and single ventilators shall be equipped with Ceco Roto Adjuster and Ceco Locking Device to permit the use of single screens for double adjacent ventilators. Locking handles above the lower rail of the window unit will not be permitted." (Solid bronze hardware will be furnished at slight extra cost if desired.)

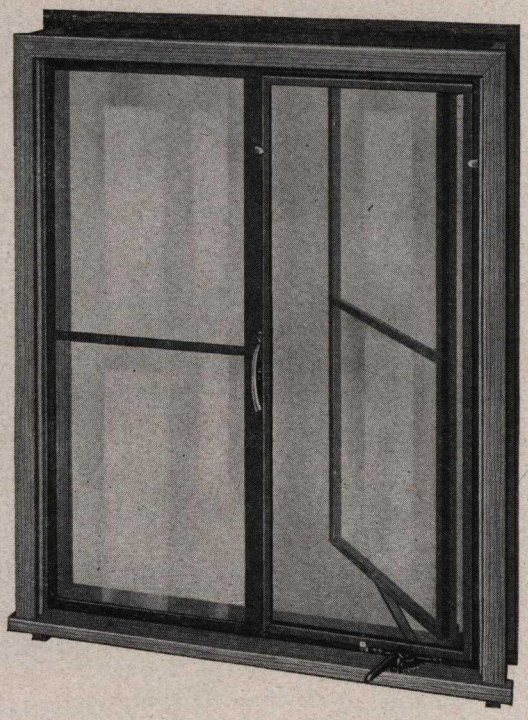
With VENETIAN BLINDS

Since there are no handles to interfere with the operation of Venetian blinds, the use of the blinds with steel casements is no longer a problem. Venetian blinds operate smoothly and satisfactorily with Ceco Steel Casements.

The PACKAGE WINDOW

THE CECO Package Window is a unit-built steel casement, glazed, outside wood cased, with all hardware included. Each window is delivered to the job with steel frame and ventilator fitted, hinged, hung and assembled; frame and ventilator Bonderized and painted with one prime coat baked on; properly glazed; attractive, bronze lacquer finish Lever type operating hardware and locking handle; sturdy wood casing attached with outside trim and sub-sill; special inside trim, stops, stool and apron supplied (unattached) when specified.

Sections, materials and construction features of Ceco Package Windows are of the same high quality as in Ceco Residence Casements. Supplied in sizes best suited to the small home and comparable in glass and ventilating areas to popular sizes of double-hung wood windows.



INSTALLED QUICKLY—WITH HAMMER and NAILS—The Ceco Package Window can be correctly and quickly installed by one man, on the outside, using hammer and nails only. Unit is simply placed in rough opening, plumbed, wedged and securely nailed to building construction through jambs and head of wood casing. Inside trim is quickly attached, completing the installation. The Ceco Package Window eliminates all installation difficulties; with it there is no fitting of sash or frame, no glass or putty to handle, no extras to buy or be misplaced.

INSIDE SCREENS—The Package Window is all ready to receive a low cost, prefabricated Ceco Inside-Screen, with 16 mesh wire cloth held in a sturdy and attractive pressed-steel frame, painted with one prime coat baked on. Screens are safely, quickly attached, interchangeable — need no marking or numbering when stored; undisturbed when windows are operated.

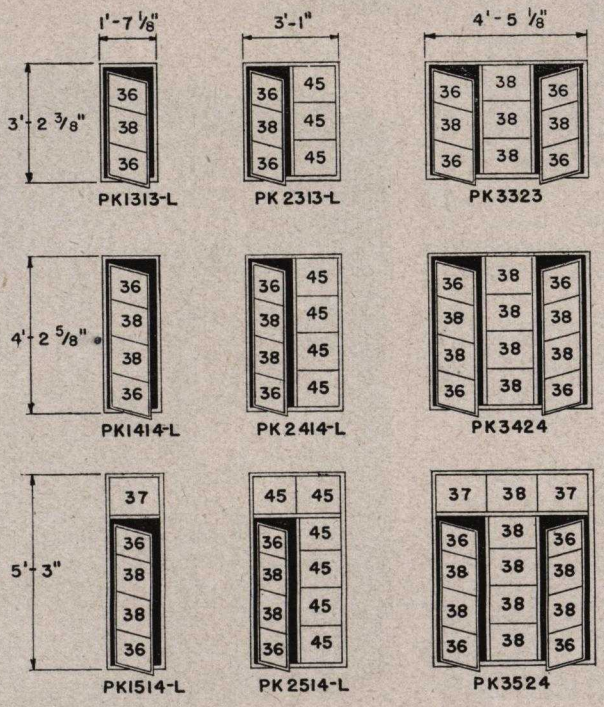
STORM SASH—The window is also designed to receive a standard, low cost, inside or outside wood-frame storm sash. Hangers for supporting storm sash at head, and a steel hook linking storm sash and casement ventilator at sill (providing limited ventilation) are supplied when specified and when outside storm sash are used.

Admit more daylight and ventilation

Easily washed from inside

Ceco screens easily attached from inside

Uses low-cost wood storm sash



GLASS SCHEDULE		
MARK	W	H
36	16	11¼
37	17¼	12
38	16	12
45	17½	12

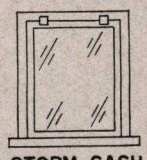
All windows are viewed from the outside.

Single ventilator units may be furnished hinged at the left or right as required. Always specify the location of the hinges with the suffix L or R.

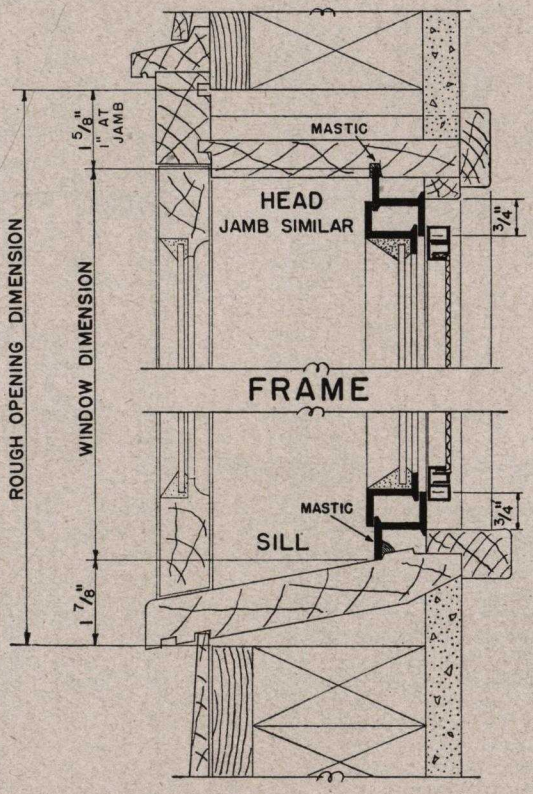
Dimensions shown are actual window sizes. See details below for rough openings and masonry openings.

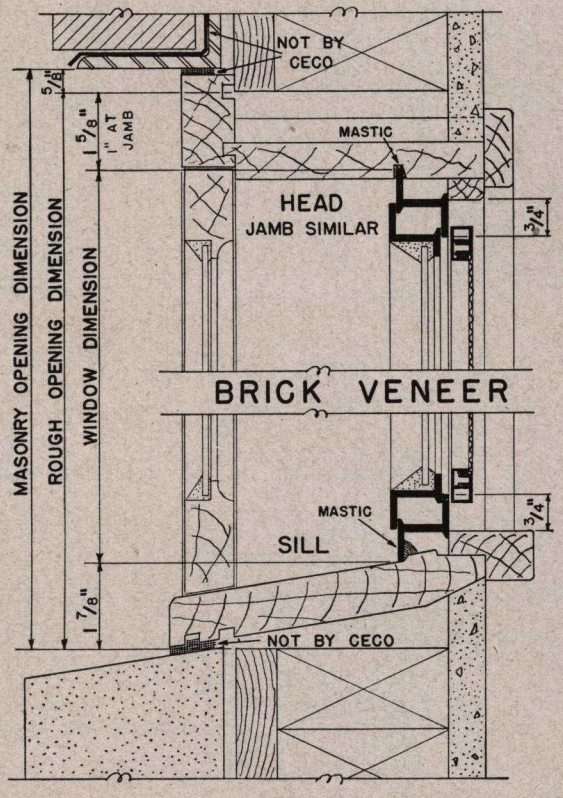
Mastic where indicated to be furnished by window erector.

CECO SCREENS
INSIDE VIEW



STORM SASH
OUTSIDE VIEW





Types and sizes approved by METAL WINDOW INSTITUTE

The HOUSING CASEMENT

The Ceco Housing Casement is specially designed for use in large low cost housing projects (either Private or Federal) involving 300 or more window units. Sections, materials, and construction features are similar to and of the same high quality found in Ceco Residence Casements.

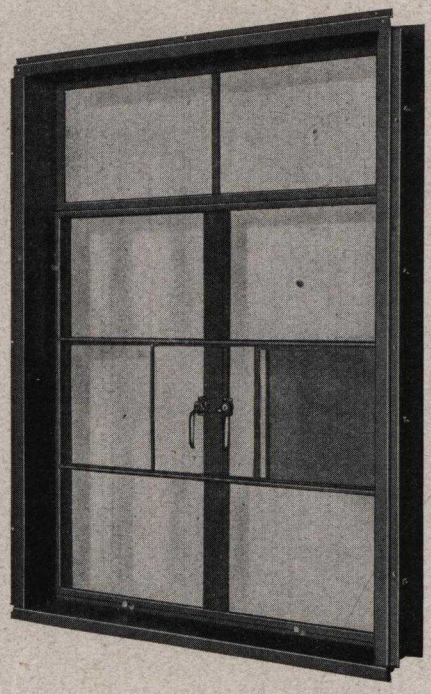
Steel Casings are furnished to provide a sturdy and durable inside trim in depths to accommodate various wall conditions. These casings eliminate interior trim and plaster difficulties and substantially reduce installation costs.

For anchorage two methods are available.

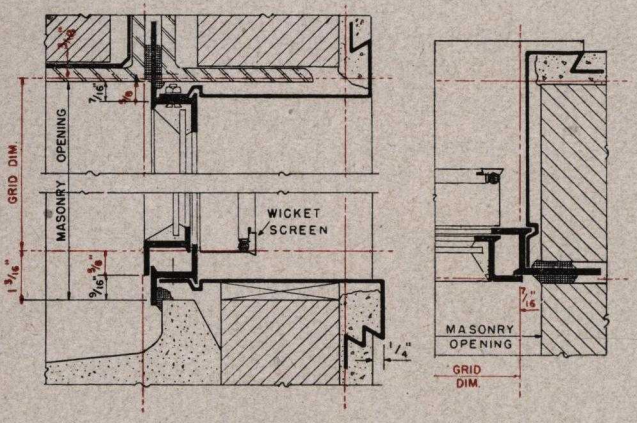
A special long leg section can be furnished at head and jambs in connection with the 18 gauge plain steel casing or a 16 gauge galvanized steel casing can be furnished extended to give an equivalent anchorage. (See detail below.)

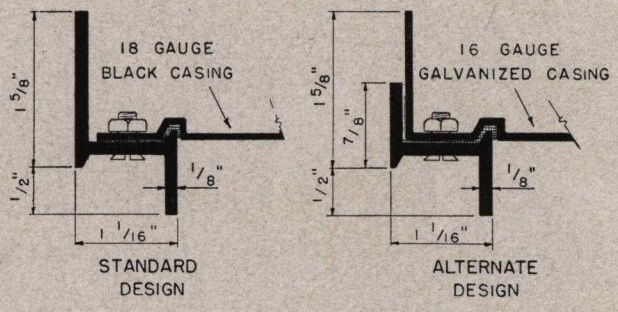
The "Simplex" type Locking Handle is used to open and close ventilators operating on an adjustable friction type hinge which holds ventilators in place when open.

The "Wicket Type" Screen is standard which permits reaching through the screen to open and close the casement leaf when screen is in place.



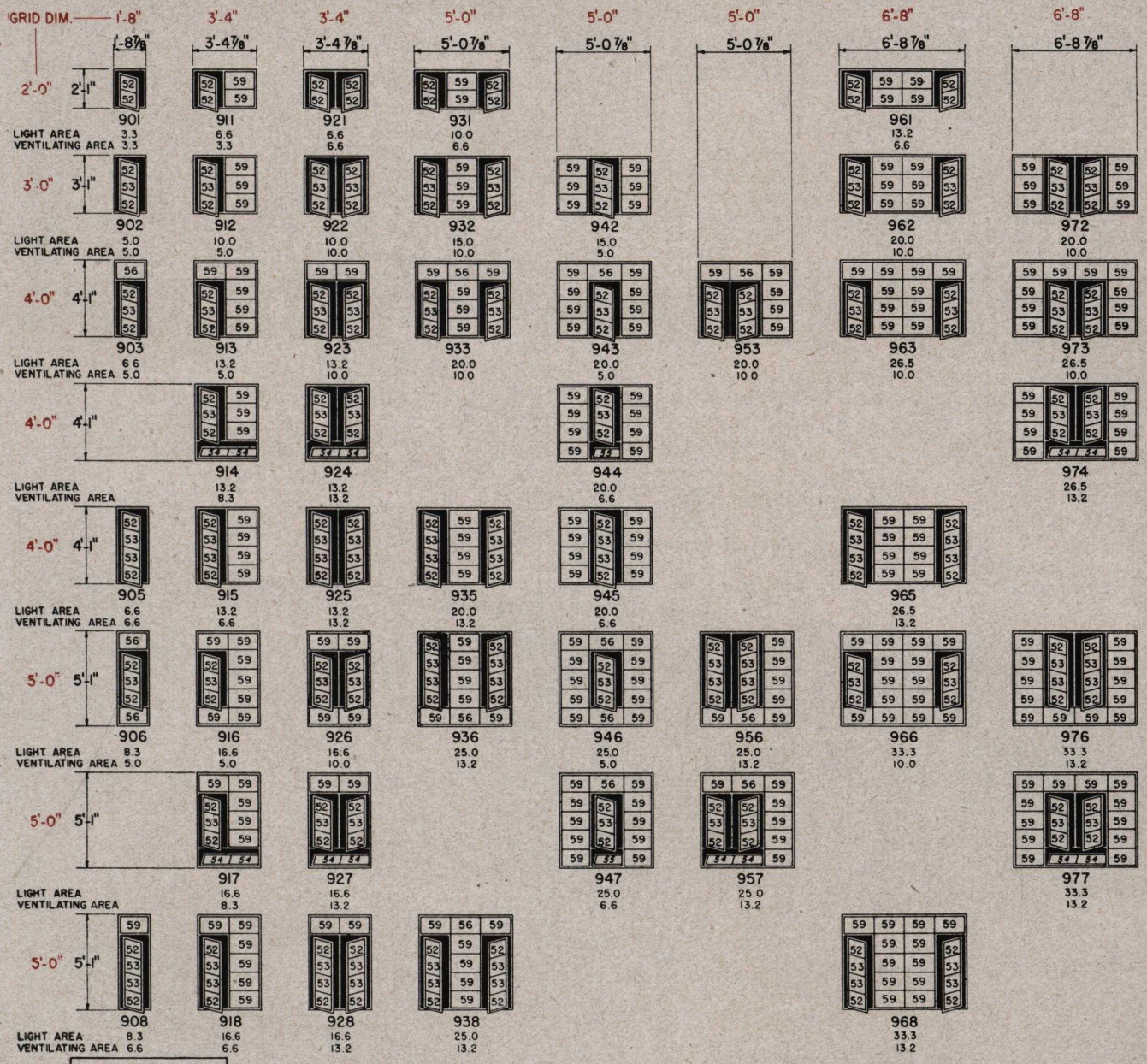
HOUSING CASEMENT INSTALLATION DETAILS





PARTIAL LIST— CECO HOUSING WINDOW INSTALLATIONS

Southridge Housing Project
West Palm Beach, Florida
U.S. Navy Housing Project
San Diego, California
Lincoln Heights Courts Housing Project
San Antonio, Texas
South Side Terrace Homes
Omaha, Nebraska
Roseland Homes Project
Dallas, Texas
Fowler's Gardens & Charlotte Courts
Lexington, Kentucky
Summit Court & Edgewood Court
Dayton, Ohio
Irvington Courts Housing Project
Houston, Texas
Elyton Village Housing Project
Birmingham, Alabama
Hillyer Street Housing Project
Hartford, Connecticut
Harrison Gardens Housing Project
Harrison, New Jersey
Ivanhoe Gardens & Duneland Village Housing Projects
Gary, Indiana
Central City Housing Project
Birmingham, Alabama
Las Casitas Housing Project
Denver, Colorado



GLASS SCHEDULE		
MARK	W	H
52	18	11
53	18	11 5/8
54	18 3/4	10 3/8
55	17 7/8	10 3/8
56	19 3/8	11 5/8
59	19 5/8	11 5/8

Side hinged ventilators swing out and are furnished with friction hinges.

Sill ventilators tilt in.

All ventilators are furnished with cam acting locking handles.

Indicate by suffix L or R whether side hinged ventilators are left or right hand. All casements are viewed from outside. Handing is determined by location of hinges. A left hand casement will have hinges on left when viewed from outside.

All windows to be set in mastic furnished by window erector.

Light and ventilating areas are arrived at by use of nominal glass sizes.

Grid lines and grid dimensions are indicated in red for the convenience of designers using the modular system.

(SEE INSTALLATION DETAILS)

Types and sizes approved by METAL WINDOW INSTITUTE

CECO STEEL PRODUCTS CORPORATION

NEW . . . IMPROVED! — FOR LASTING BEAUTY

The new Ceco Intermediate Windows represent years of study, engineering, and practical experience. A complete new line of sections has been designed with the purpose of improving the product and to accomplish lasting beauty.

The Intermediate Casements, Combination and Projected Windows offer the following important features for monumental buildings including schools, hospitals, office buildings, institutional buildings, and any type of installation requiring lasting qualities, adequate ventilation and easy screening.

VENTILATION—Up to 100% if desired.

SCREENING—Windows are designed for easy screening, either completely inside or outside or combination of both.

SAFETY—Inswing ventilators at sills have a protective feature particularly in schools or hospitals. Windows are fireproof.

CLEANING—Windows can be readily cleaned from inside.

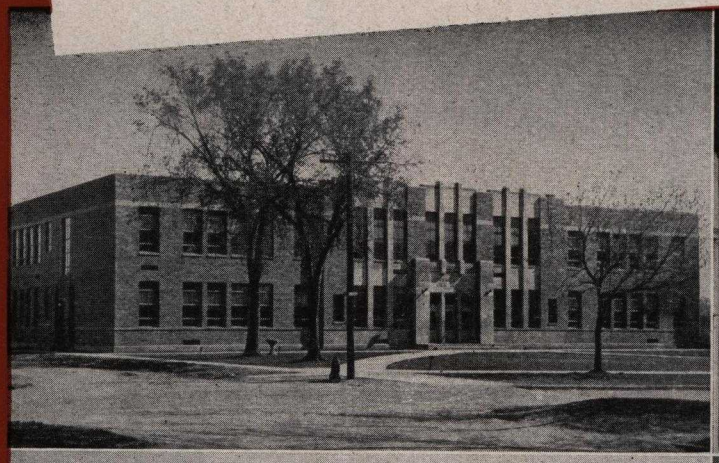
WEATHERTIGHT—The new design of section and the post war planning for streamline production assures precision in manufacturing practices. Ceco Steel Windows will not shrink, warp or stick.

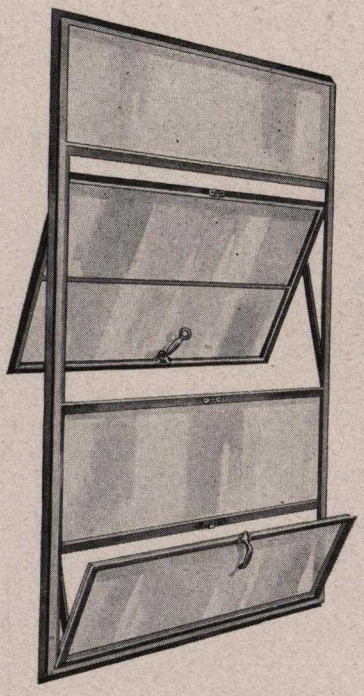
EASY OPERATION—Either by use of adequately designed Roto Underscreen Operators which permit opening of windows without touching screens or standard hardware. Ventilators operate easily, quietly, with no stress or bind.

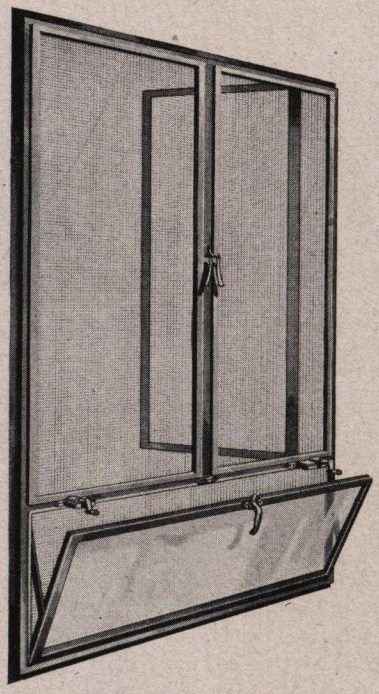
DAYLIGHT—The slender lines of Ceco Intermediate Casements afford from 20% to 30% more daylight for the same opening than the ordinary double hung types. This is accomplished by less frame area but more glass area.

SHADING—Provisions are made for convenient attachment of various kinds of blinds, curtains, draperies as desired and specified by the architects.

FIRE SAFETY—Steel Windows are fire resisting.







SPECIFICATIONS

GENERAL—All steel windows shall be of Intermediate Casement, Intermediate Projected, or Intermediate Combination type, of designs indicated on plans, complete with all necessary anchors, hardware and equipment as hereinafter specified, all as manufactured by the Ceco Steel Products Corporation of Chicago, Illinois.

MATERIAL—All windows shall be made from new billet hot-rolled sections having projections forming weathering contacts, rolled integral with the sections. No built up members forming weathering contacts shall be allowed. The ventilator frames shall be not less than 1 3/8" deep from front to back, and their supporting frames not less than 1 1/2" deep and shall have a combined weight of not less than 3.65 pounds per lineal foot. Supporting frame members shall either be of equal leg design, and shall have attached, when required, continuous fins weighing not less than 1 pound per lineal foot, or shall be an unequal leg section permitting continuous anchorage of not less than 5/8". Muntins shall be not less than 1/8" thick nor more than 7/8" on face.

CONSTRUCTION—The joints of window and ventilator frames shall be welded solid along their lines of intersection. Muntin intersections shall be interlocked and ends of muntins shall be neatly coped or mitered on the face and contact surfaces. The finished work shall have tight joints. All weathering contacts shall be continuous between parallel flat surfaces and not less than 1/4" in contact width at both inside and outside points of closure, after assembly.

Projected ventilators shall be balanced by two supporting arms not less than 3/16" x 3/4", attached to brackets by use of bronze shoulder rivets. Brackets are securely riveted to ventilator and frame. Friction shall be provided by two bronze shoes sliding in channel of frame member. Contacts of sliding parts and pivot points shall be steel to a non-ferrous metal. Ventilators shall hold firmly open in any position and the opening and closing movements shall be uniformly smooth and free from twist and rattle.

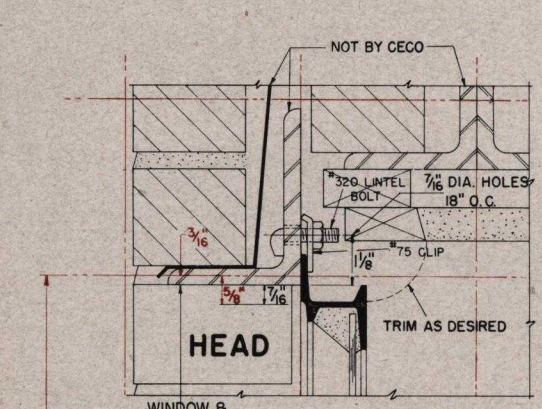
HARDWARE (Simplex Non-Screen Type)—Side hinged casements shall be equipped with friction type steel extension hinges having bronze pins, to facilitate cleaning of glass from the inside. (For vents of more than 10 square feet, it is recommended that sill adjusters shall be provided.) Heavy bronze cam lock fasteners shall be provided. Where ventilators are more than five feet in height, double locking device shall be furnished. Transom ventilators projecting out shall be equipped with bronze pole rings at the top and bronze pole catch at bottom when beyond easy reach from floor. Projected vents opening out within reach of floor and sill vents opening in shall have bronze cam fasteners.

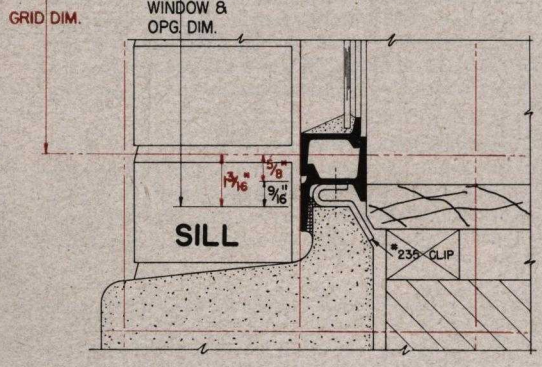
HARDWARE (Roto Screen Type)—Side hinged casements shall be equipped with free swinging steel extension hinges having bronze pins. Bronze type screen locking handles shall be provided engaging with keeper concealed within the members. When screens are in place the ventilator shall be opened and closed by means of solid bronze worm and gear underscreen (Roto) operators. Transom ventilators projecting out shall be equipped with bronze adjusters operating under the screen and through the frame member permitting the use of close-up interior screens and permitting operation of ventilator without touching screen, OR ventilators shall be provided with bronze cam fasteners. Sill ventilators opening in shall have bronze cam fasteners, screen provided on the exterior.

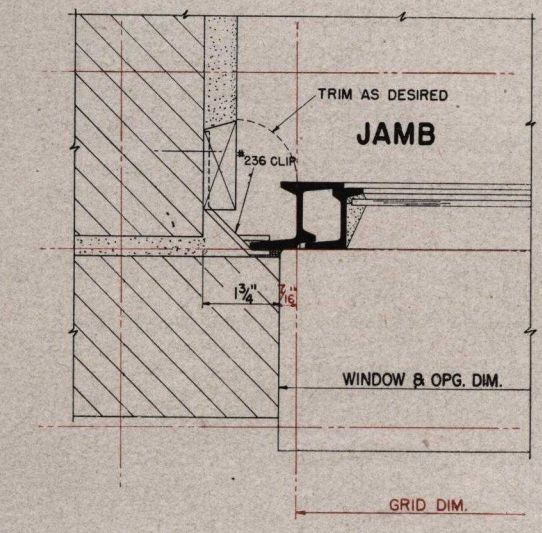
BONDERIZING AND PAINTING—All windows shall be Bonderized and receive one coat of gray paint, oven-dried, before shipment.

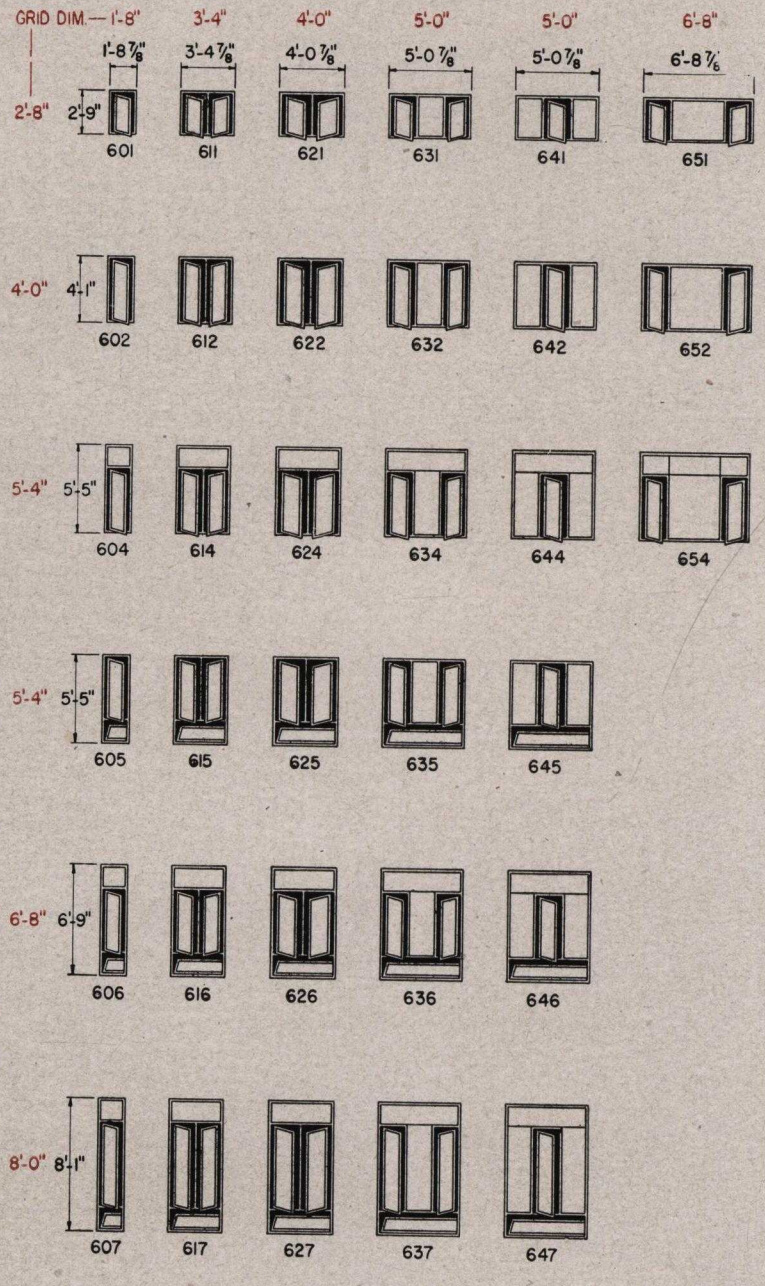
ERECTION—The window manufacturer shall erect all sash in prepared openings. Mastic, provided by the window erector, shall be used in sufficient quantity to provide a weather-tight seal between windows and wall construction. Mastic shall be non-staining and specifically adapted for such use. All windows shall have a careful adjustment immediately after erection and be left in perfect working order.

GLAZING—Windows shall be designed for putty glazing from the outside with spring wire glazing clips and steel casement putty. (Glazing beads either exterior or interior will be provided at extra cost.) Glass, putty, glazing clips and glazing by others.

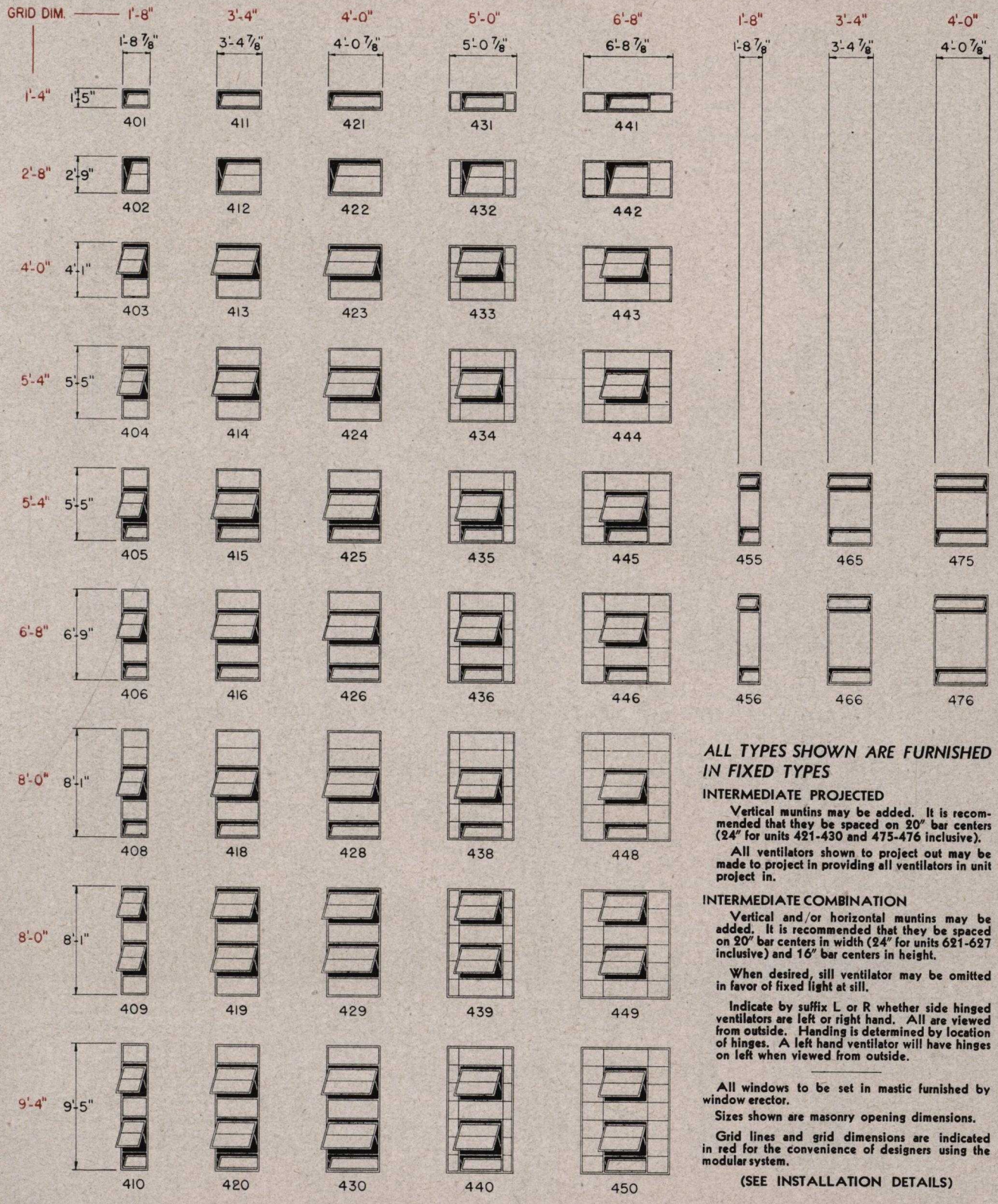








For notes, see Page 17.



ALL TYPES SHOWN ARE FURNISHED IN FIXED TYPES

INTERMEDIATE PROJECTED

Vertical muntins may be added. It is recommended that they be spaced on 20" bar centers (24" for units 421-430 and 475-476 inclusive).

All ventilators shown to project out may be made to project in providing all ventilators in unit project in.

INTERMEDIATE COMBINATION

Vertical and/or horizontal muntins may be added. It is recommended that they be spaced on 20" bar centers in width (24" for units 621-627 inclusive) and 16" bar centers in height.

When desired, sill ventilator may be omitted in favor of fixed light at sill.

Indicate by suffix L or R whether side hinged ventilators are left or right hand. All are viewed from outside. Handing is determined by location of hinges. A left hand ventilator will have hinges on left when viewed from outside.

All windows to be set in mastic furnished by window erector.

Sizes shown are masonry opening dimensions.

Grid lines and grid dimensions are indicated in red for the convenience of designers using the modular system.

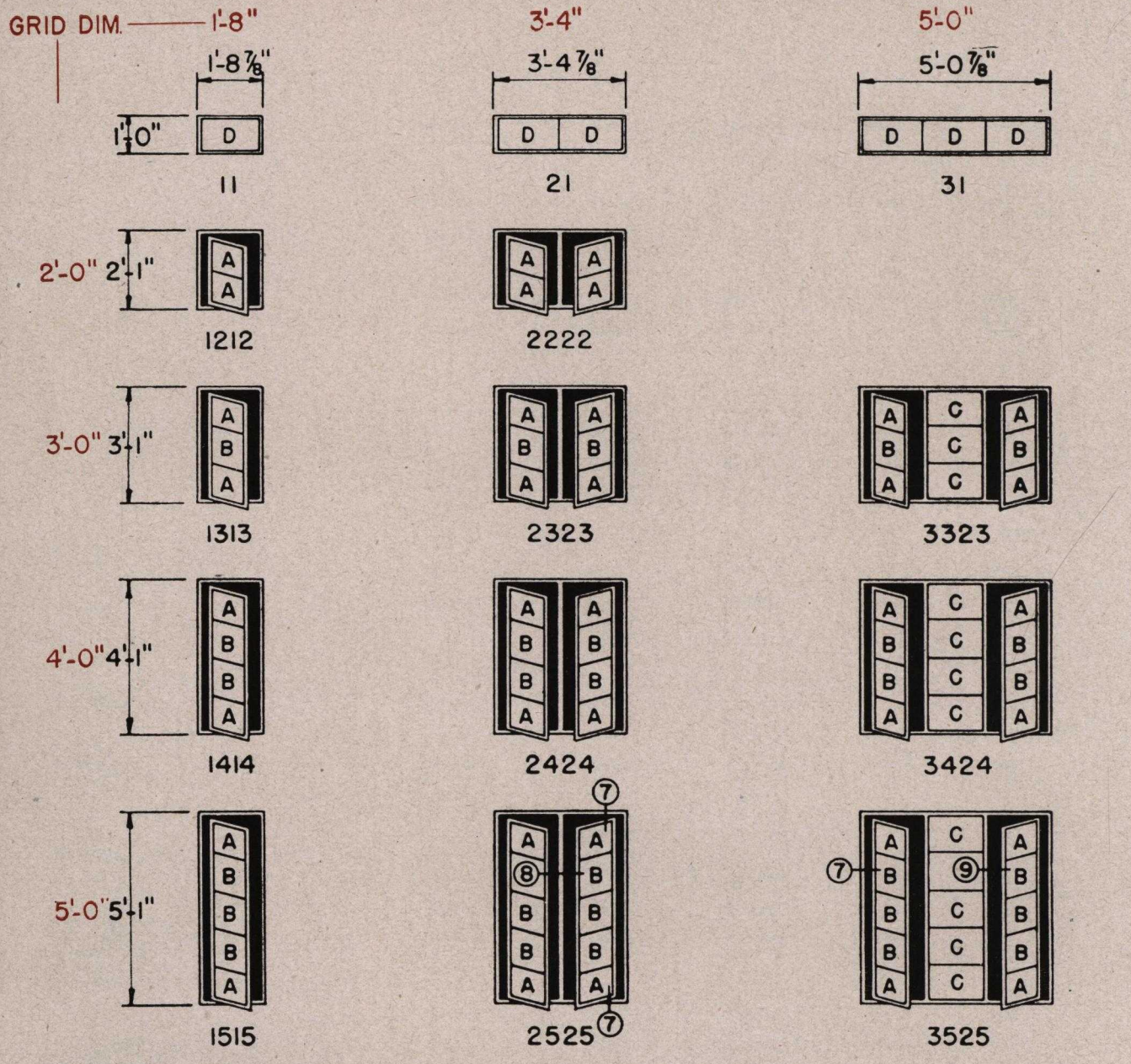
(SEE INSTALLATION DETAILS)

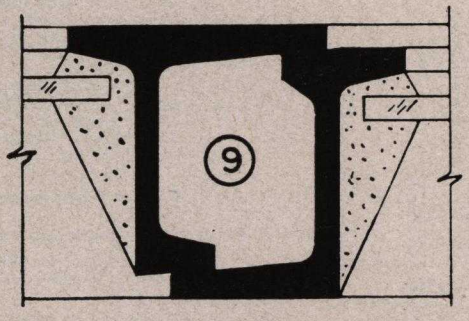
Types and sizes approved by METAL WINDOW INSTITUTE

INTERMEDIATE PROJECTED WINDOWS

TYPES AND SIZES

CECO STEEL PRODUCTS CORPORATION





GLASS SIZES
A=17⅝" x 10⅝"
B=17⅝" x 11⅝"
C=19⅝" x 11⅝"
D=19⅝" x 10⅝"

Refer to page 20 for details not shown.

Indicate by suffix L or R whether ventilators are left or right hand. All windows are viewed from outside. Handing is determined by location of hinges. A left hand ventilator will have hinges on left when viewed from outside.

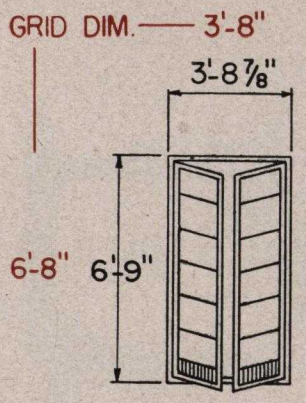
All windows to be set in mastic furnished by window erector.

Sizes shown are masonry opening dimensions.

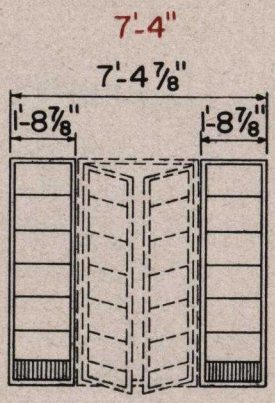
Grid lines and grid dimensions are indicated in red for convenience of designers using the modular system.

Types and sizes approved by METAL WINDOW INSTITUTE

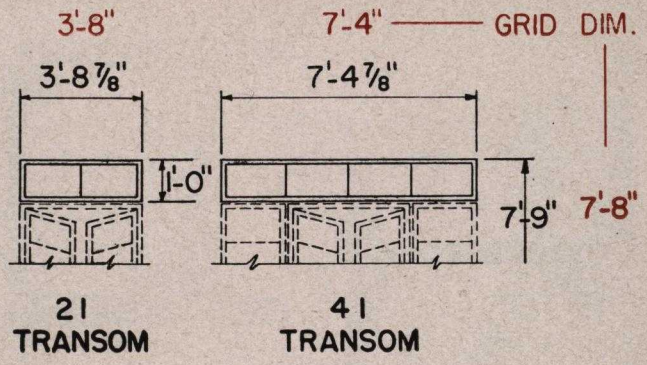
ENGINEERING MAKES THE BIG DIFFERENCE IN CECO CONSTRUCTION PRODUCTS



STANDARD DOOR

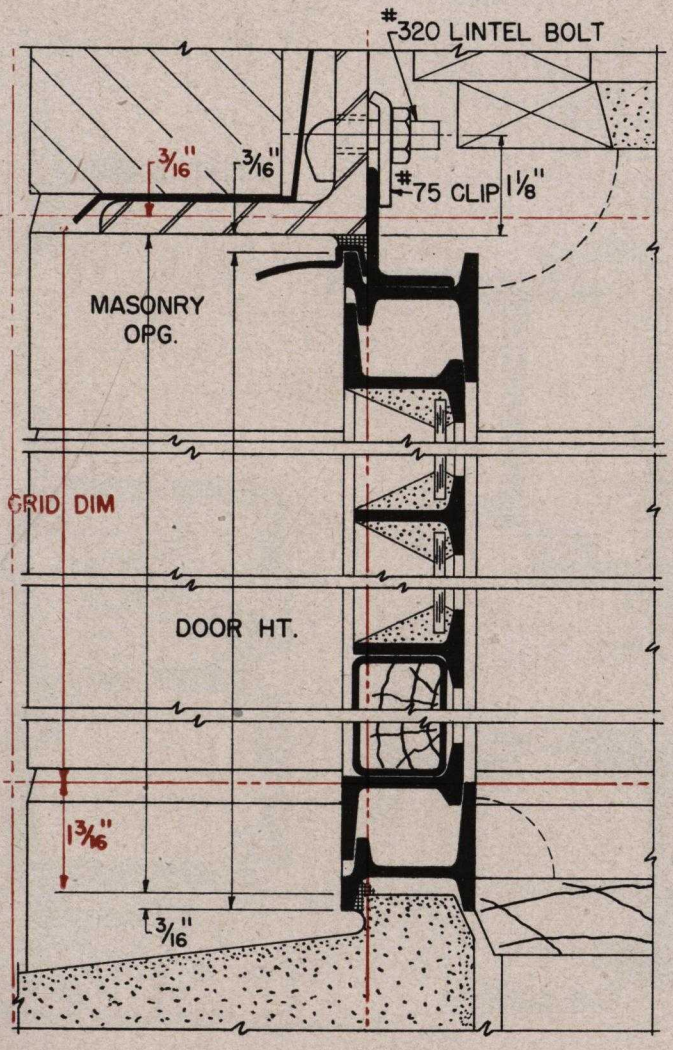


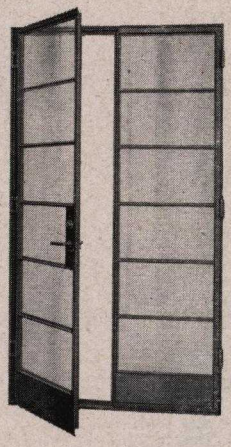
1 7 SIDE-LIGHTS



2 1 TRANSOM

4 1 TRANSOM





Ceco Casement Doors are ideal for porches, court and sunroom entrances, and as a French door between rooms. These doors are made in one standard size but can be used with fixed sidelights and transoms to provide elasticity in architectural treatment.

Door frames are made of special hot rolled sections 1½" in depth. The door is made of 1⅜" deep sections. Each leaf is hung on three friction type hinges and opens out only.

Doors are supplied with bronze mortise lock and handles; and top and bottom bolts for inactive leaf. The locks are furnished with thumb turns but may be had with cylinders at small additional cost.

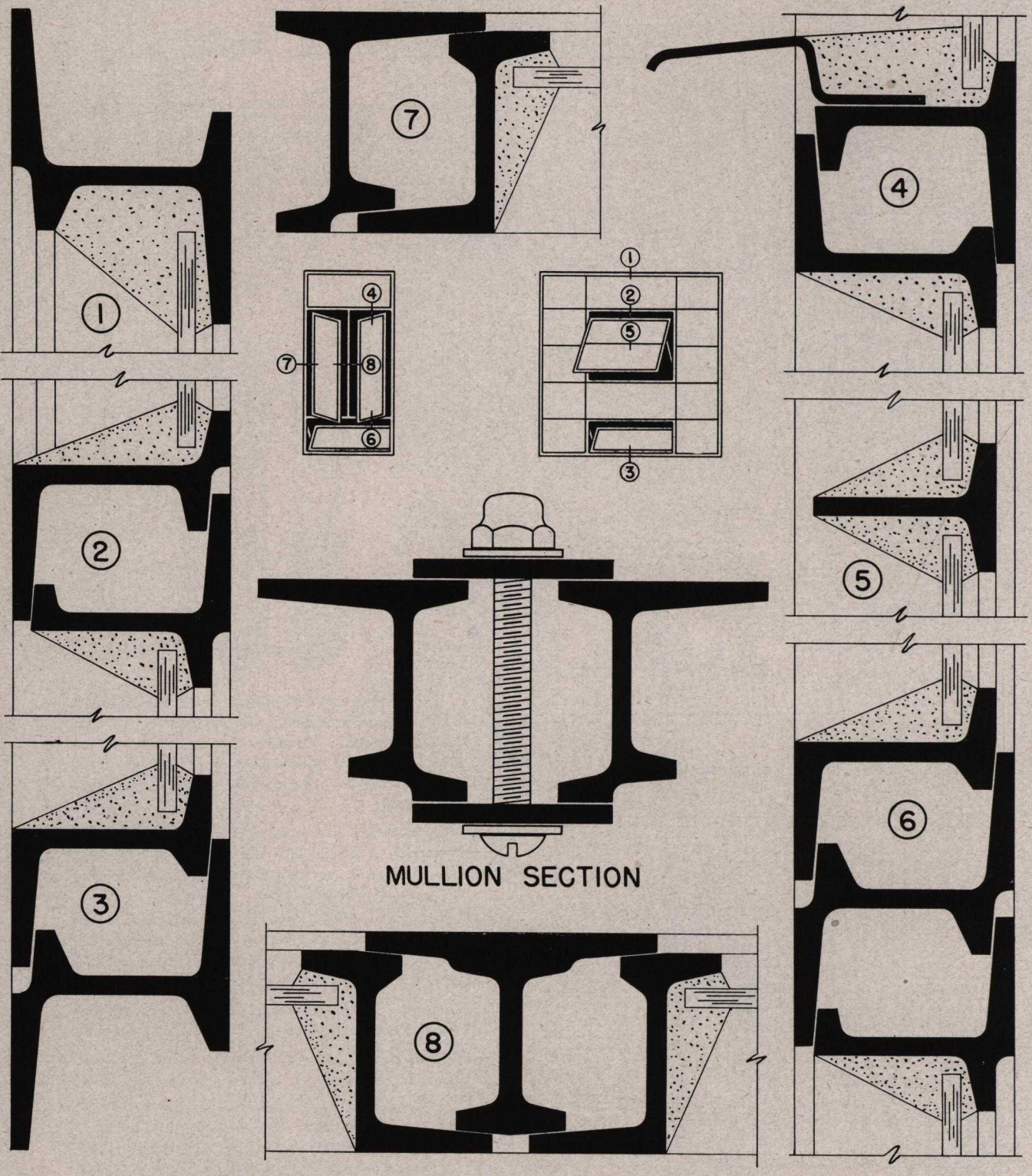
Thresholds, fins for head and jambs, and mullions are also available when specified and at extra cost.

With Ceco Casement Doors the following advantages are secured:

Beauty	Low Initial Cost
More Daylight	Low Installation Cost
Easy Operation	No Expensive Maintenance
Weather-tight	No Warping or Sticking
Permanent	

Types and sizes approved by METAL WINDOW INSTITUTE

CECO STEEL PRODUCTS CORPORATION



20 INTERMEDIATE, COMBINATION & PROJECTED WINDOWS

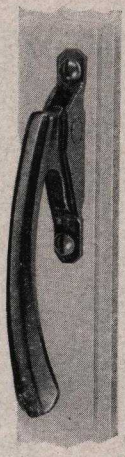
SECTIONS THROUGH WINDOW

LOCKING HANDLES

Top Handle for Project-Out Ventilator. Bottom Handle for Project-In Ventilator.

ROTO HANDLE

For Screen Type Windows

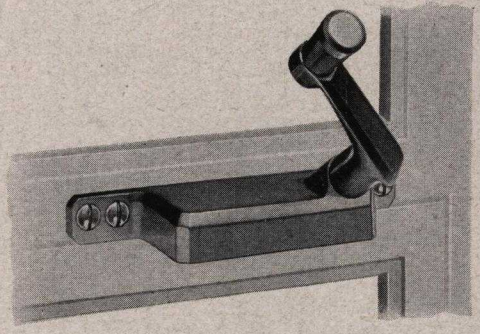


SIMPLEX HANDLE

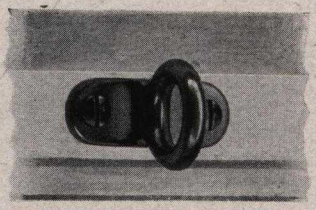
For Non-Screen Type Windows.

LOCKING HANDLE

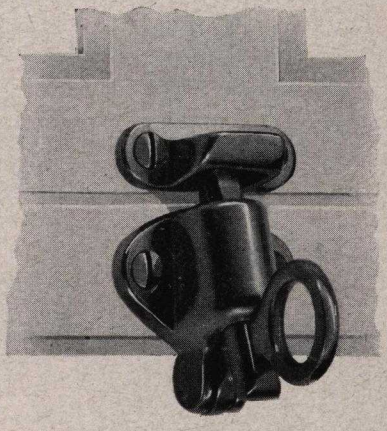
For Open-In Ventilator



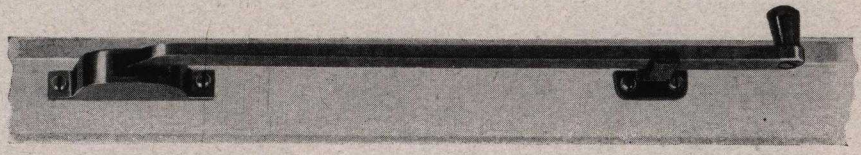
ROTO OPERATOR



POLE RING

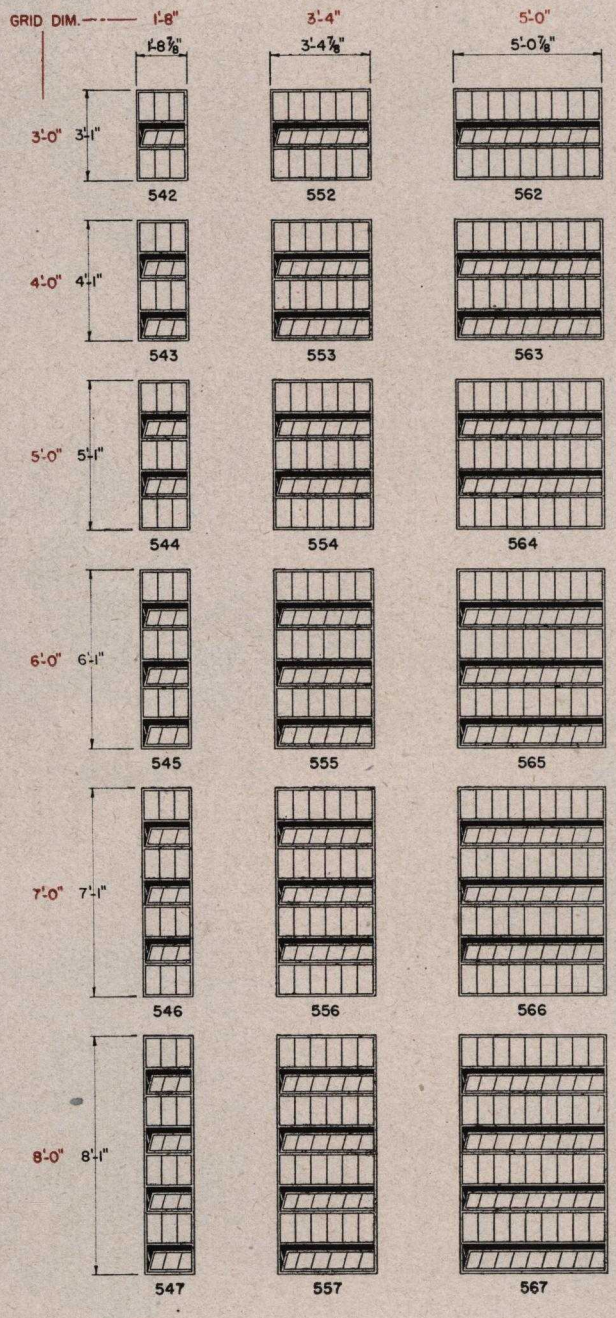


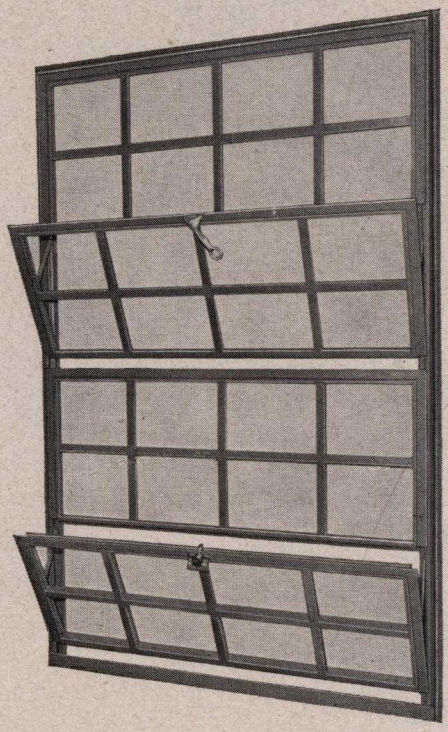
SPRING LATCH



PUSH BAR—Underscreen

PSYCHIATRIC WINDOWS





Ceco Psychiatric Windows have projected, open-in ventilators limited to maximum clear opening of 5½". Muntins are spaced to provide small lights preventing entrance or egress when glass is removed.

Ventilator attachments are designed to prevent removal or the forcing open of windows.

In-swing projected ventilators provide controlled ventilation and provide protection from rain.

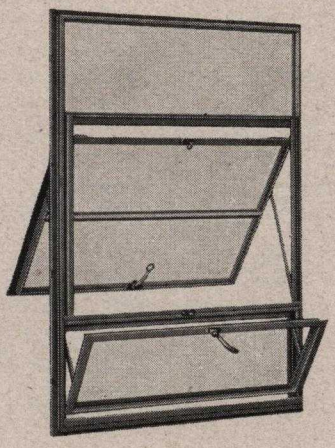
Windows are easily washed from inside the room and can be screened economically.

Dimensions shown are opening dimensions.

22 INTERMEDIATE PSYCHIATRIC WINDOWS TYPES AND SIZES

Types and sizes approved by METAL WINDOW INSTITUTE

Ceco Architectural Projected Windows are ideally suited for all public, commercial, or institutional buildings. They are designed so that weather protection is possible when they are open. Ease of screening is made possible because ventilators either project fully toward the interior or exterior of the normal plane.



SPECIFICATIONS

GENERAL—All windows shall be the Architectural Projected Type as manufactured by the Ceco Steel Products Corporation, of Chicago, Illinois, or approved equal, as per written approval of the architect, and shall be of sizes and types as shown on architect's drawings.

MATERIAL—All sections shall be especially designed, hot-rolled, new billet steel. All frame members shall be unequal leg channel section and shall allow ¾" continuous anchorage. Muntins shall be hot-rolled T Sections. Mullions shall be standard CECO hot-rolled, solid steel T Sections.

CONSTRUCTION—Windows shall be designed and manufactured for either inside or outside putty glazing as specified. Frames and ventilators shall be mortise and tenon, air-hammer riveted at all corners. After assembling, all four corners of the frame and ventilator shall be solidly welded. Joints at frames shall be mortise and tenon air-hammer riveted. Ventilators shall have double contact weathering continuous around all four sides.

Each ventilator shall be accurately balanced on two supporting arms of solid steel accurately riveted to the frame and ventilator and concealed when the ventilator is closed. Ventilators shall be operated by means of fully enclosed bronze friction shoes, suspended from the hinged point of the ventilator with a compression spring, assuring constant friction at all times.

Bronze shoes are to slide vertically in a channel guide especially adapted and applied properly to assure easy operation. All weathering members shall be securely welded to the frame.

Where two or more windows are placed side by side in the same opening, provide CECO vertical adjustable mullions. Where two or more windows are placed one above another in the same opening, horizontal mullions shall be provided. (See Structural Specifications.) Provide mullion covers for vertical mullions where called for on plans. Furnish necessary clips, anchors and bolts for installing the windows. (**Note**: Include in steel specifications punching to accommodate clips.)

HARDWARE—All hardware shall be solid bronze throughout. All ventilators opening out shall be equipped with a bronze cam lock and pole ring of standard CECO design. All ventilators opening in and within reach of the floor shall be equipped with bronze cam handle. All ventilators opening in and not easily accessible shall be equipped with automatic spring lock.

ERECTION—All windows shall be erected by the Ceco Steel Products Corporation in openings prepared by others. All windows shall be set plumb and true, properly aligned and securely anchored before glazing. Apply unattached hardware in accordance with the manufacturer's directions. (**Note**: All structural work for the support of steel windows shall be provided by another contractor.) (**Note**: Include in masonry specifications, that all mortar, grouting, pointing, etc., shall be done by the masonry contractor after windows are erected.)

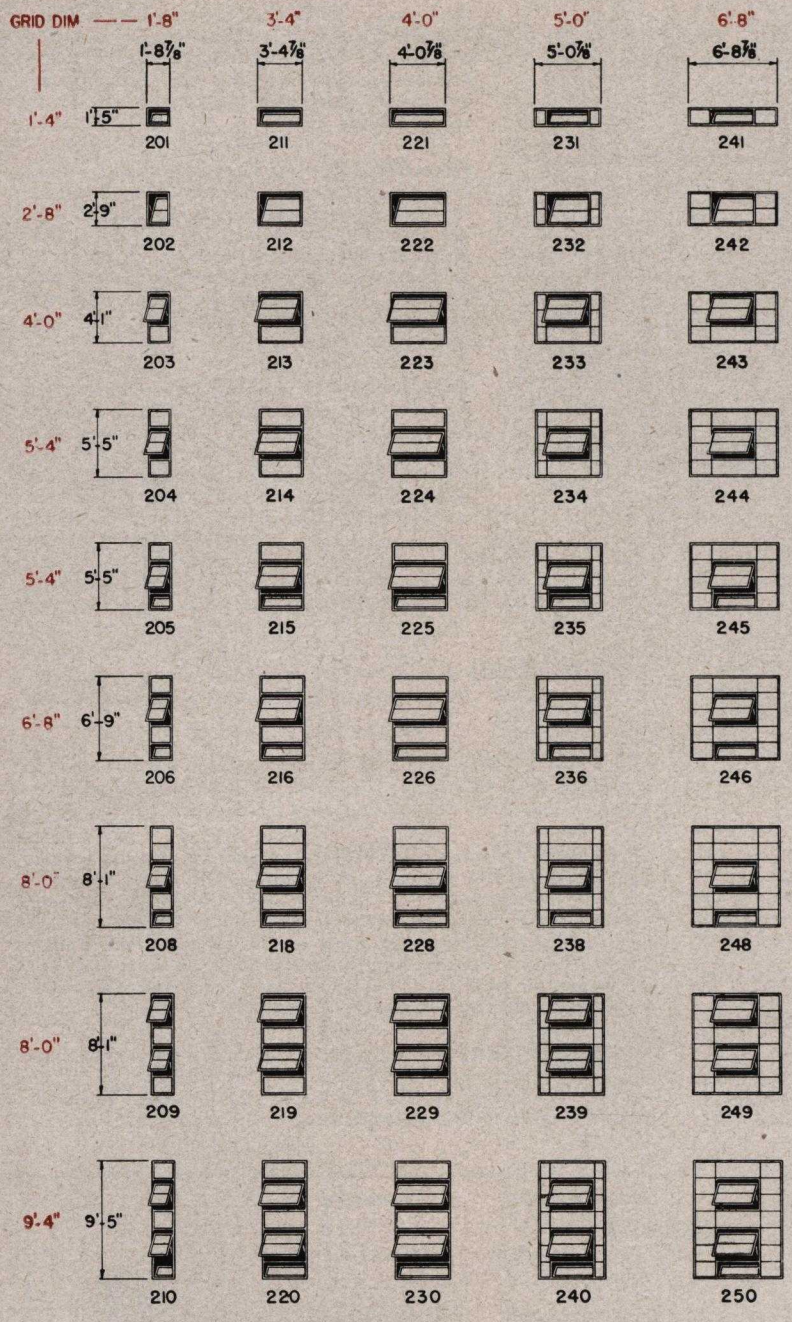
BONDERIZING AND PAINTING—All windows shall be Bonderized and receive one coat of gray paint, oven-dried, before shipment.

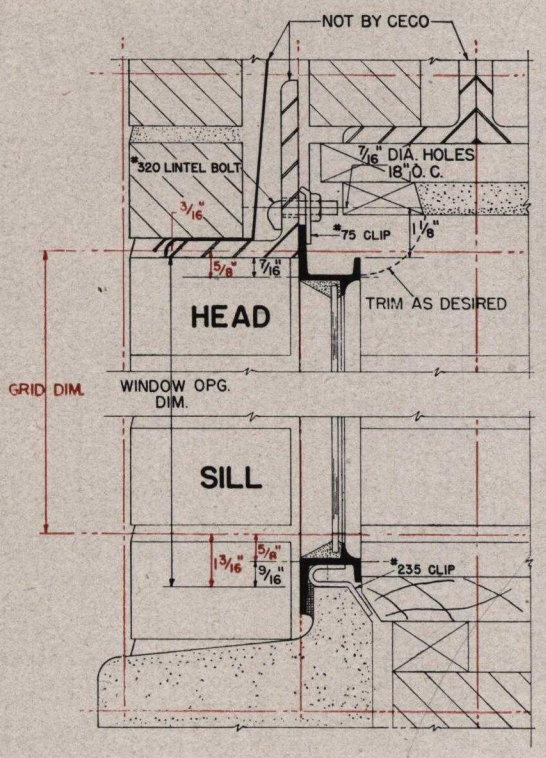
GLAZING—Windows shall be designed for either inside or outside glazing with spring wire glazing clips and steel window putty. Glass, putty and glazing clips by others.

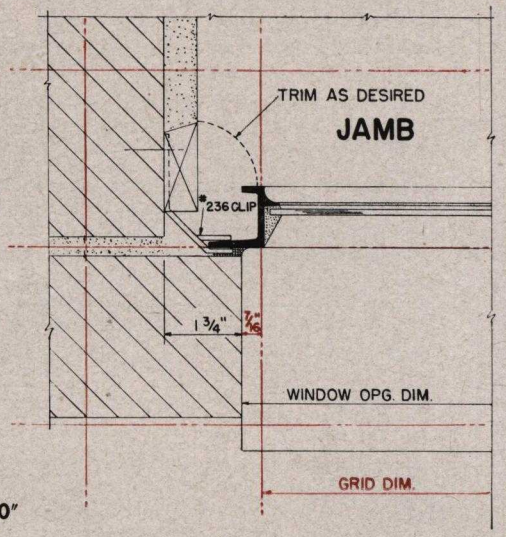
SCREENS—(**Note**: Screens and preparation for screens are not part of the window contract, but windows can be prepared and screens furnished by the Ceco Steel Products Corporation.) (**Note**: Flat screens applied to the outside of window for the Projected-in ventilators and inside for the Projected-out ventilators.) (**Note**: Underscreen hardware can be furnished for Projected-out ventilators at a slight additional cost.) For complete information on Screens, see File Index.

UNDERWRITERS'—Underwriters' Label of approval may be specified for all sizes shown up to 7′ 0″ in width by 12′ 0″ in height. These windows must be inside angle glazed. The maximum glass size is 350 square inches.

HARDWARE







ALL TYPES SHOWN ARE FURNISHED IN FIXED TYPES.

Vertical muntins may be added. It is recommended that they be spaced on 20" bar centers (24" for units 221-230 inclusive).

All ventilators shown to project out may be made to project in providing all ventilators in unit project in.

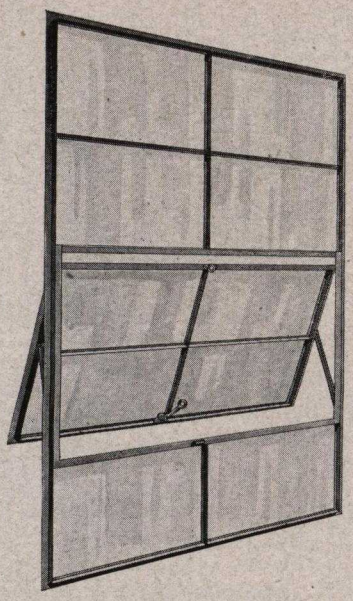
Windows are designed for inside or outside putty glazing. Details shown are for outside putty glazing.

Sizes shown are masonry opening dimensions.

Grid lines and grid dimensions are indicated in red for the convenience of designers using the modular system.

Types and sizes approved by METAL WINDOW INSTITUTE

ENGINEERING MAKES THE BIG DIFFERENCE IN CECO CONSTRUCTION PRODUCTS



PROJECTED WINDOW

FOR USE IN COMMERCIAL AND INDUSTRIAL BUILDINGS WHEN SHADING AND SCREENING ARE VERY NECESSARY. THESE WINDOWS ARE OFFERED IN A FULL RANGE OF STANDARD TYPES AND SIZES.

SPECIFICATIONS

GENERAL—All windows shall be the Commercial Projected or Horizontally Pivoted Type as manufactured by the Ceco Steel Products Corporation of Chicago, Illinois; or approved equal, as per written approval of the architect and shall be of sizes and types as shown on architect's drawings.

MATERIAL—All sections shall be especially designed, hot-rolled, new billet steel. All frame members shall be special angle section and shall allow $\frac{3}{4}$" continuous anchorage. Muntins shall be hot-rolled T sections. Mullions shall be standard Ceco hot-rolled solid steel T sections.

CONSTRUCTION — Pivoted window frames and ventilators shall be mortise and tenon, air-hammer riveted. Projected window frames and ventilators shall be welded at all corners. Joints at frames for pivoted and projected windows shall be mortise and tenon, air-hammer riveted. All ventilators shall have double contact weathering continuous around all four sides.

PROJECTED WINDOWS—Each ventilator shall be accurately balanced on two supporting arms of solid steel, bronze bushed, accurately riveted to the frame and ventilator and concealed when the ventilator is closed. Ventilators shall be operated by means of fully enclosed bronze friction shoes suspended from the hinged point of the ventilator with a compression spring, assuring constant friction at all times.

Bronze shoes are to slide vertically in a channel guide especially adapted and applied properly to assure easy operation. All weathering members shall be securely welded to the frame.

Pivoted Windows—All ventilators shall be horizontally pivoted and supported by special solid rolled steel extension butts.

Projected and Pivoted—Where two or more windows are placed side by side in the same opening, provide CECO Vertical Adjustable Mullions. Mullion covers available only for following mullion dimensions: $2\frac{1}{8}$", $2\frac{5}{8}$", and $3\frac{1}{8}$". Where two or more windows are placed one above another in the same opening, horizontal mullions shall be provided. (See Structural Specifications.) Furnish necessary clips, anchors and bolts for installing the windows. (**Note**: Include in steel specifications punching to accommodate clips.)

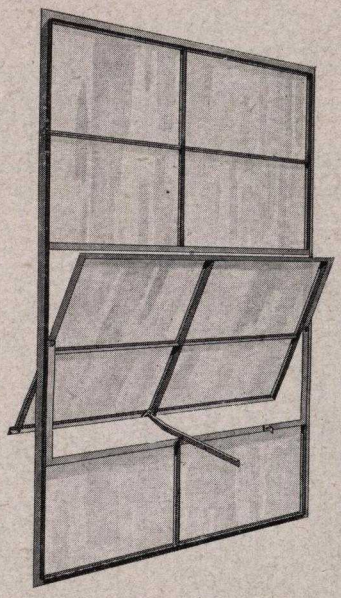
HARDWARE—Projected—All hardware shall be malleable iron, cadmium plated. All ventilators opening out shall be equipped with a cam lock and pole ring of standard CECO design. All ventilators opening in and within reach of the floor shall be equipped with cam handle. When ventilators are not within reach of floor, they shall be provided with malleable spring latch.

HARDWARE—Pivoted—All ventilators shall be equipped with spring latch and chain, push-bar or cam lock hardware as required.

MECHANICAL OPERATORS — All runs of ventilators shown on drawings as "Mechanically Controlled" shall be equipped with approved type of operator as furnished Ceco Steel Products Corporation.

BONDERIZING AND PAINTING—All windows shall be Bonderized and receive one coat of gray paint, oven-dried, before shipment.

GLAZING—Windows shall be designed for inside glazing with spring wire glazing clips and steel window putty. Glass, putty and glazing clips by others.



HORIZONTALLY PIVOTED WINDOW

WHERE SHADING AND SCREENING ARE NOT SO ESSENTIAL AND A SLIGHT ECONOMY IS DESIRED, CECO PIVOTED WINDOWS ARE IDEAL. THE USUAL CECO STANDARDS OF QUALITY ARE EMBODIED.

SCREENS—Projected—(**Note**: Screens and preparations for screens are not part of the window contract, but windows can be prepared and screens furnished by the Ceco Steel Products Corporation.) (**Note**: Flat screens applied to the outside of window for the Projected-In Ventilators and inside for the Projected-Out Ventilators.) (**Note**: Underscreen hardware can be furnished for Projected-Out Ventilators at a slight additional cost.)

SCREENS—Pivoted—(**Note**: Screens and preparation for screens are not part of the window contract, but windows can be prepared and screens furnished by the Ceco Steel Products Corporation.) (**Note**: Metal screens are so arranged that the upper half of the screen is outside of the ventilator and the lower half on the inside.) For complete information on Screens, see File Index.

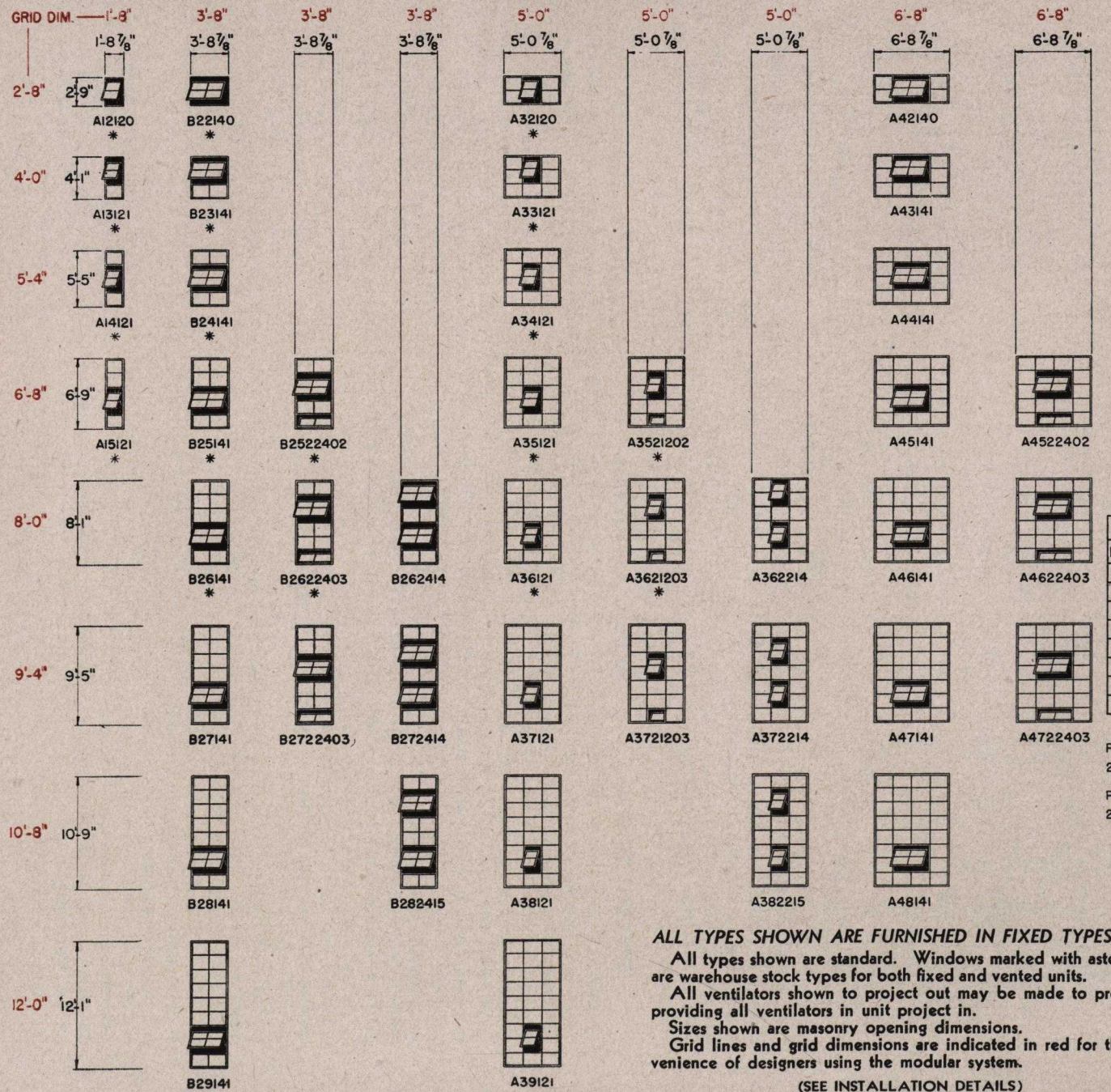
UNDERWRITERS'—Underwriters' label of approval may be specified for all standard sizes shown and special sizes up to 7' 0" in width by 12' 0" in height. These windows must be inside angle glazed. The maximum glass size is 350 sq. in.

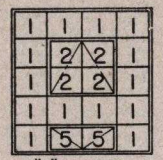
26 COMMERCIAL PROJECTED WINDOWS

TYPES AND SIZES

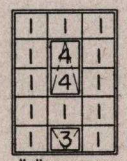
ENGINEERING MAKES THE BIG DIFFERENCE IN CECO CONSTRUCTION PRODUCTS

Types and sizes approved by METAL WINDOW INSTITUTE

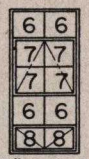




"A" UNITS



"A" UNITS



"B" UNITS

GLASS SCHEDULE		
MARK	W	H
1	19 5/8	15 5/8
2	18 5/8	14 5/8
3	17 5/8	13 5/8
4	17 5/8	14 5/8
5	18 5/8	13 5/8
6	21 5/8	15 5/8
7	20 5/8	14 5/8
8	20 5/8	13 5/8

PREFIX "A" DENOTES 20"X16" BAR CENTERS

PREFIX "B" DENOTES 22"X16" BAR CENTERS

ALL TYPES SHOWN ARE FURNISHED IN FIXED TYPES.

All types shown are standard. Windows marked with asterisk (*) are warehouse stock types for both fixed and vented units.

All ventilators shown to project out may be made to project in providing all ventilators in unit project in.

Sizes shown are masonry opening dimensions.

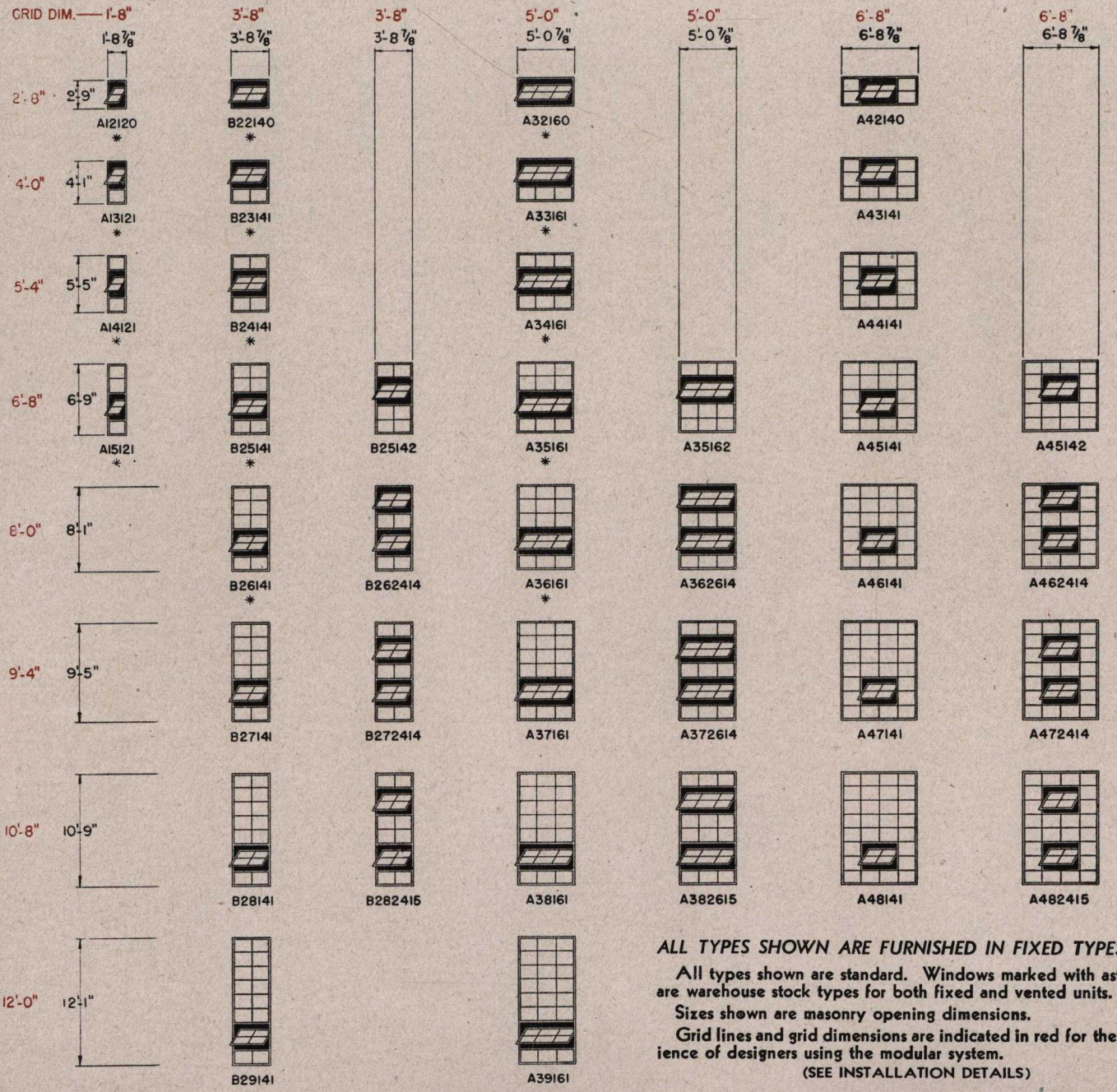
Grid lines and grid dimensions are indicated in red for the convenience of designers using the modular system.

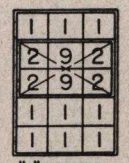
(SEE INSTALLATION DETAILS)

Types and sizes approved by METAL WINDOW INSTITUTE

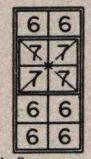
HORIZONTALLY PIVOTED WINDOWS

TYPES AND SIZES





"A" UNITS



"B" UNITS

"A" UNITS

GLASS SCHEDULE		
MARK	W	H
1	19 5/8	15 5/8
2	18 5/8	14 5/8
4	17 5/8	14 5/8
6	21 5/8	15 5/8
7	20 5/8	14 5/8
9	19 5/8	14 5/8

PREFIX "A" DENOTES 20"X16" BAR CENTERS

PREFIX "B" DENOTES 22"X16" BAR CENTERS

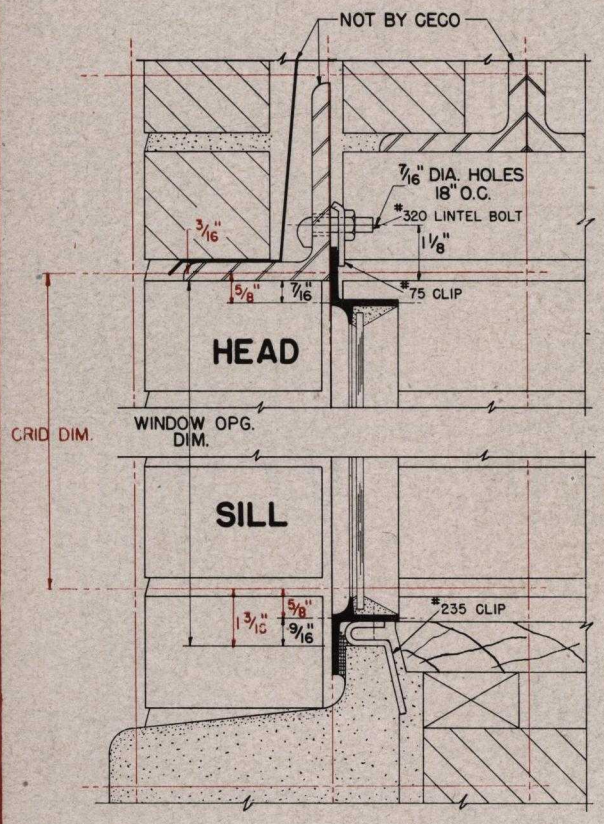
ALL TYPES SHOWN ARE FURNISHED IN FIXED TYPES.

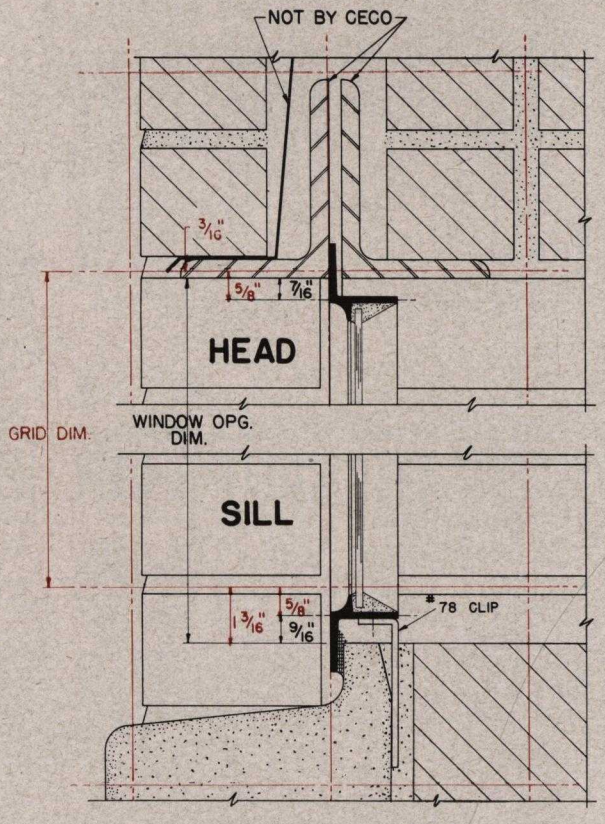
All types shown are standard. Windows marked with asterisk (*) are warehouse stock types for both fixed and vented units.

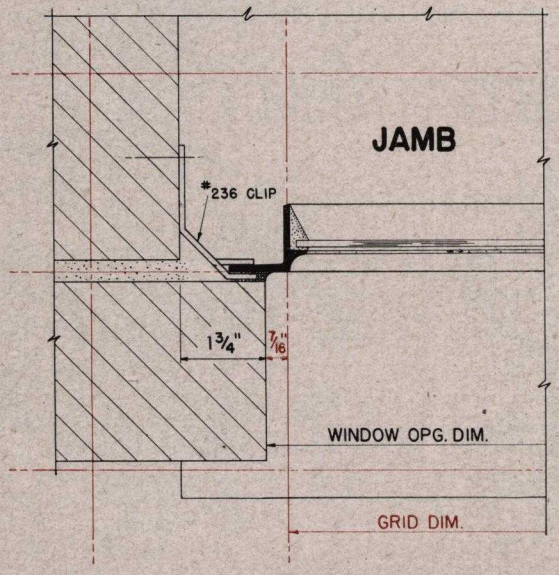
Sizes shown are masonry opening dimensions.

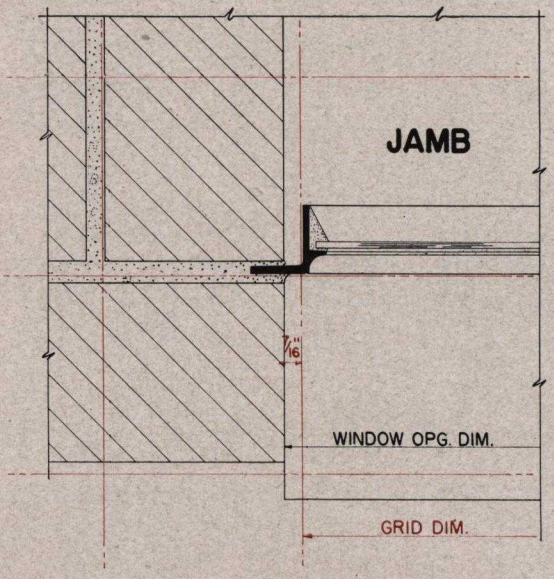
Grid lines and grid dimensions are indicated in red for the convenience of designers using the modular system.

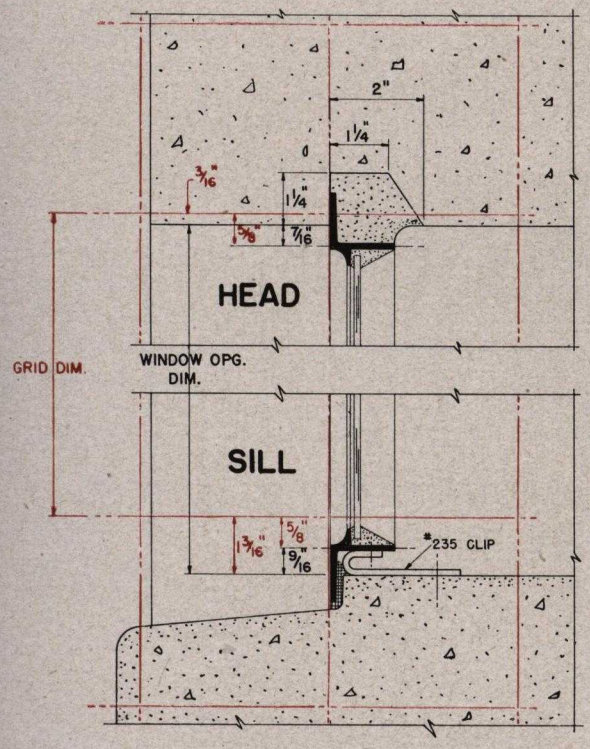
(SEE INSTALLATION DETAILS)

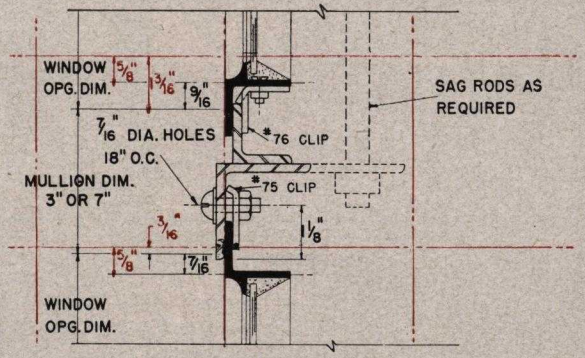

NOT BY CECO
7/16" DIA. HOLES 18" O.C.
#320 LINTEL BOLT
3/16"
1 1/8"
5/8"
7/16"
#75 CLIP
HEAD
GRID DIM.
WINDOW OPG. DIM.
SILL
1 3/16"
5/8"
9/16"
#235 CLIP


NOT BY CECO
3/16"
5/8"
7/16"
HEAD
GRID DIM.
WINDOW OPG. DIM.
SILL
1 3/16"
5/8"
9/16"
#78 CLIP

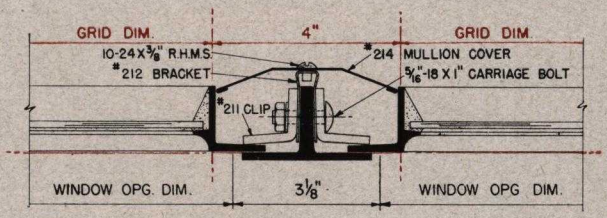

JAMB
#236 CLIP
1 3/4"
7/16"
WINDOW OPG. DIM.
GRID DIM.


JAMB
7/16"
WINDOW OPG. DIM.
GRID DIM.

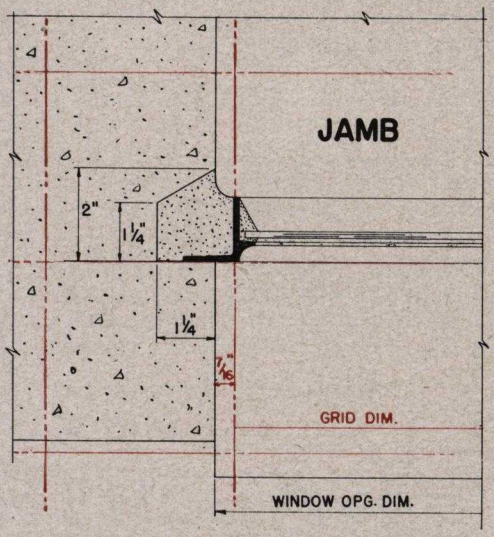


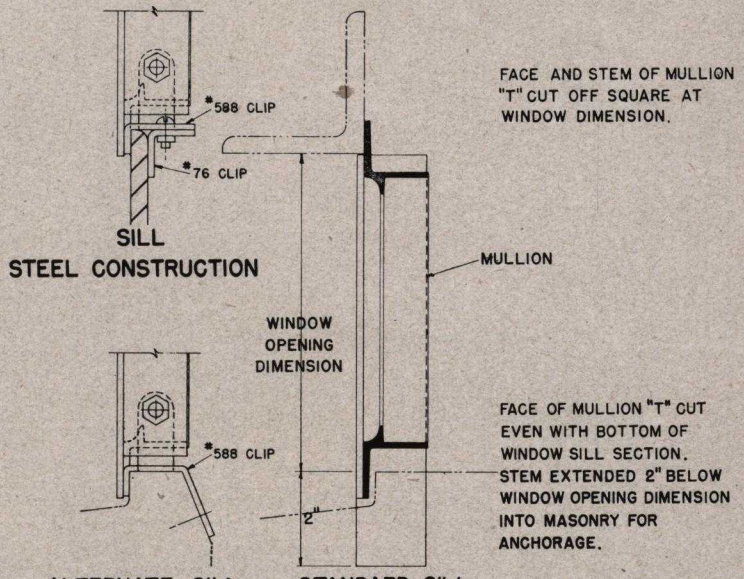


HORIZONTAL MULLION

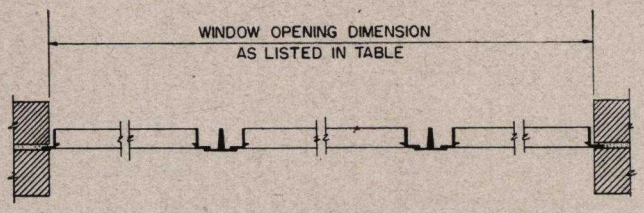


VERTICAL MULLION

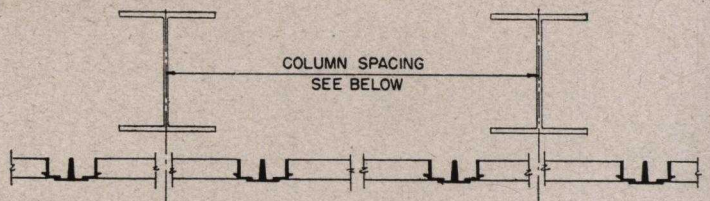



*588 CLIP
*76 CLIP
SILL
STEEL CONSTRUCTION
FACE AND STEM OF MULLION "T" CUT OFF SQUARE AT WINDOW DIMENSION.
MULLION
WINDOW OPENING DIMENSION
*588 CLIP
FACE OF MULLION "T" CUT EVEN WITH BOTTOM OF WINDOW SILL SECTION. STEM EXTENDED 2" BELOW WINDOW OPENING DIMENSION INTO MASONRY FOR ANCHORAGE.
2"
ALTERNATE SILL
STANDARD SILL
MASONRY CONSTRUCTION

COMBINATION TABLE



WINDOWS SET IN MASONRY OPENINGS



WINDOWS IN CONTINUOUS BANDS SET IN FRONT OF STRUCTURAL COLUMNS

Quantities and Widths of Windows Used In Openings Listed

Grid →		1′–8″	3′–8″	5′–0″	6′–8″	4″
Dimension ↓	Window & Opening Dimension	1′-8⅞″ 1 Light	3′-8⅞″ 2 Lights	5′-0⅞″ 3 Lights	6′-8⅞″ 4 Lights	3⅛″ Mull. Dim.
1′–8″	1′–8⅞″	1	–	–	–	–
3′–8″	3′–8⅞″	–	1	–	–	–
5′–0″	5′–0⅞″	–	–	1	–	–
6′–8″	6′–8⅞″	–	–	–	1	–
7′–8″	7′–8⅞″	–	2	–	–	1
9′–8″	9′–8⅞″	1	2	–	–	2
10′–4″	10′–4⅞″	–	–	2	–	1
11′–8″	11′–8⅞″	–	3	–	–	2
13′–0″	13′–0⅞″	–	2	1	–	2
13′–8″	13′–8⅞″	–	–	–	2	1
14′–4″	14′–4⅞″	–	1	2	–	2
14′–8″	14′–8⅞″	–	2	–	1	2
15′–8″	15′–8⅞″	–	–	3	–	2
15′–8″	15′–8⅞″	–	4	–	–	3
17′–4″	17′–4⅞″	–	–	2	1	2
17′–8″	17′–8⅞″	–	1	–	2	2
18′–4″	18′–4⅞″	–	2	2	–	3
19′–0″	19′–0⅞″	–	–	1	2	2
19′–8″	19′–8⅞″	–	5	–	–	4
20′–8″	20′–8⅞″	–	–	–	3	2
21′–0″	21′–0⅞″	–	–	4	–	3
21′–8″	21′–8⅞″	–	2	–	2	3
22′–4″	22′–4⅞″	–	3	2	–	4
23′–8″	23′–8⅞″	–	6	–	–	5
23′–8″	23′–8⅞″	–	2	3	–	4
24′–4″	24′–4⅞″	–	–	2	2	3
25′–0″	25′–0⅞″	–	1	4	–	4
25′–8″	25′–8⅞″	–	3	–	2	4
26′–4″	26′–4⅞″	–	–	5	–	4

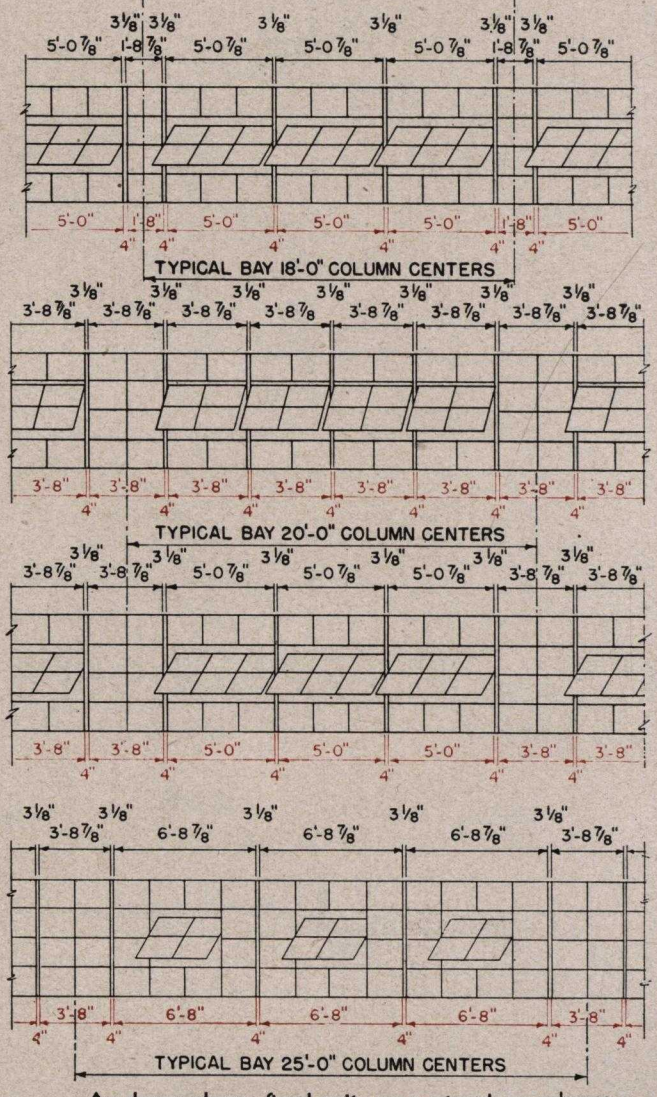
Window & Opening Height Dimensions

	Window & Opening Dimension	Grid Dimension		Window & Opening Dimension	Grid Dimension
2 Lights	2′–9″	2′–8″	6 Lights	8′–1″	8′–0″
3 Lights	4′–1″	4′–0″	7 Lights	9′–5″	9′–4″
4 Lights	5′–5″	5′–4″	8 Lights	10′–9″	10′–8″
5 Lights	6′–9″	6′–8″	9 Lights	12′–1″	12′–0″

Dimensions in above table are based on using a "T" mullion (#118) having a 2¾″ face dimension allowing a mullion dimension of 3⅛″. (See Page 29.)

To meet special conditions a "T" (#8) having a 2½″ face can be furnished to reduce the mullion dimension to a minimum of 2⅛″.

Unless otherwise specified, the #118 mullion will always be furnished.



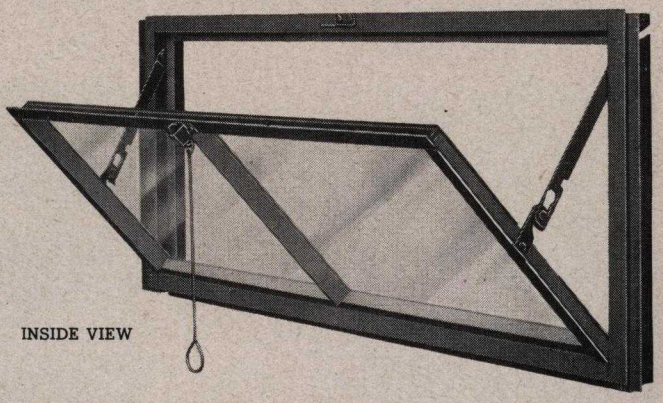
As shown above, fixed units are centered on columns to provide the maximum ventilating area.

All mullion dimensions used are 3⅛″, mullion grid dimension being 4″.

Total opening widths of multiple unit openings may be quickly determined by using grid dimensions (shown in red) of windows and mullions and adding ⅞″ to total grid width for necessary clearance at jamb.

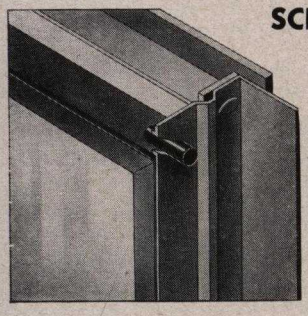
THE NEW IMPROVED *Ezee-Action* BASEMENT WINDOW

The window is Ezee to install; Ezee to glaze because it is Ezee to remove the vent by simply pressing inward on the side arms at the pivot points; Ezee to open and close by means of easily accessible rigid hardware; Ezee to ventilate in either of two positions. They are BONDERIZED and then painted (baked on). There are new angle fins at the jambs which provide permanent anchorage and an accurate masonry guide. These new angle fins provide also a simple and foolproof method of hanging and attaching screens and storm sash and securely locking them from the inside. (See illustration below.)



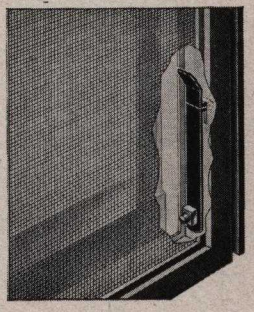
INSIDE VIEW

The bottom rail of the ventilator serves as an effective drip as well as a contact member. As always, Ceco Ezee-Action Steel Basement Windows are made of the same hot-rolled sections used in Ceco Residence Casements. This means rigid, sturdy windows. Ventilators have double-contact weathering on all four sides to help keep the basement dry.



SCREENS—New Method of Attaching—No Parts to Lose!

Easy-to-use Screen and Storm Windows are available for all Ezee-Action Basement Windows. New attaching hardware is integral. Using the top-hung principle, either Screen or Storm Window is easily dropped in place. Lugs at top drop into slots in fins. Bottom is snapped in place with finger-tip spring latch in side rail. No loose attachments to misplace . . . no bothersome parts to change. Spring latches are operated and locked from inside.

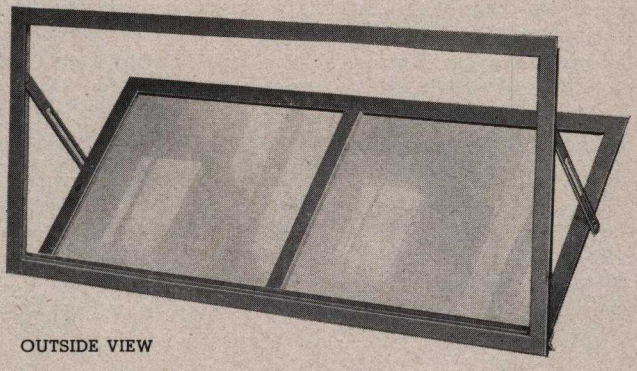


CECONOMY BASEMENT WINDOW

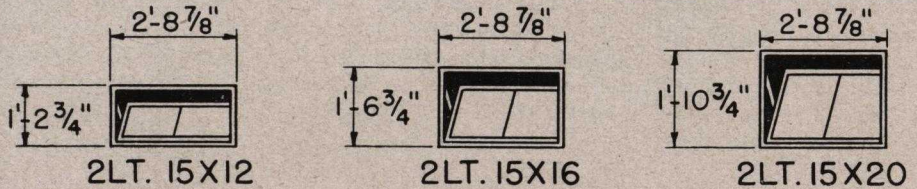
Ceco Ceconomy Basement Windows are made of 1″ T Bar Sections with specially designed hot rolled sill section. Operation similar to Ezee Action Window. Designed to meet conditions where the utmost economy is required.

The Ceconomy Window is prepared for screen and storm window attachment and is furnished in the same types and sizes as the Ezee-Action Window.

The Ezee-Action and Ceconomy Basement Windows are designed for putty glazing with spring wire clips and steel window putty. Glass, putty, glazing clips and glazing by others.



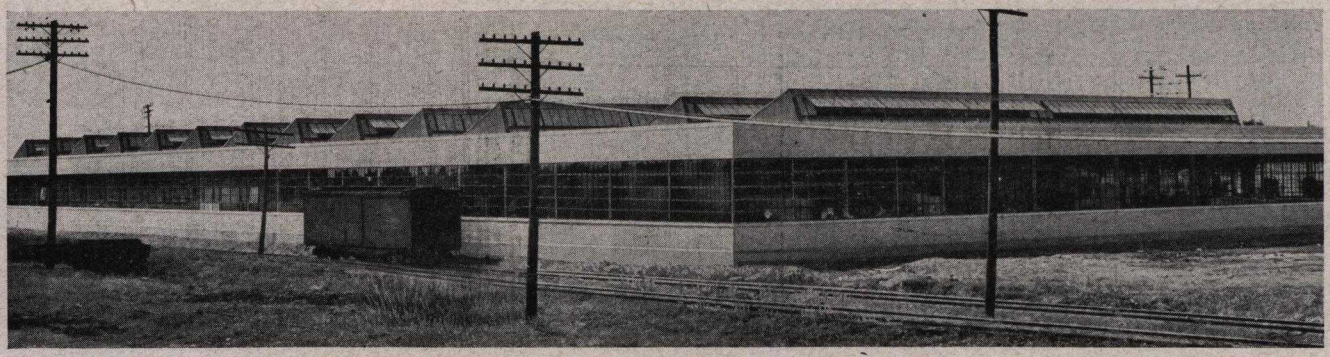
OUTSIDE VIEW



TYPES & SIZES FOR EZ-ACTION AND CECONOMY BASEMENT WINDOWS

Types and sizes approved by METAL WINDOW INSTITUTE

CONTINUOUS WINDOWS



SPECIFICATIONS

GENERAL—All windows shall be Continuous Type as manufactured by the Ceco Steel Products Corporation, of Chicago, Illinois, or approved equal, as per written approval of the architect and shall be of sizes and types as shown on architect's drawings. (Continuous windows are generally used in monitor and saw-tooth roof construction. Continuous windows should not be set on a slope exceeding thirty degrees from vertical. They provide an easily and rapidly operated continuous window opening.)

MATERIAL—All sections shall be especially designed, hot-rolled, new billet steel. Panel head and end members shall be angles. Muntins shall be 1¼" x 1¼" x 3/16" T's. Sills shall be especially designed sections with long down standing leg rolled to make close contact with the building construction.

CONSTRUCTION—Panels shall be joined end to end by splice plates. Muntins shall be spaced 2' 0" on centers. At the ends of all swing sections next to the building construction, there shall be provided stationary panels. Where called for on plans, provide 2' 0" wide storm panels. Storm panels shall be secured to head and sill with steel clips, and shall underlap the swing section and shall be provided at the wall with a continuous drip set over the sill flashing.

HARDWARE—All continuous windows shall be top hung on heavy steel butts, spaced approximately four feet on centers. Butts shall be rigidly riveted to head angle furnished with bolts for attachments to building girts. Fixed windows shall be attached to building with heavy angle clips at head and with suitable straps at sill.

STRUCTURAL SUPPORT—All structural work for the support of steel windows shall be provided by another contractor.

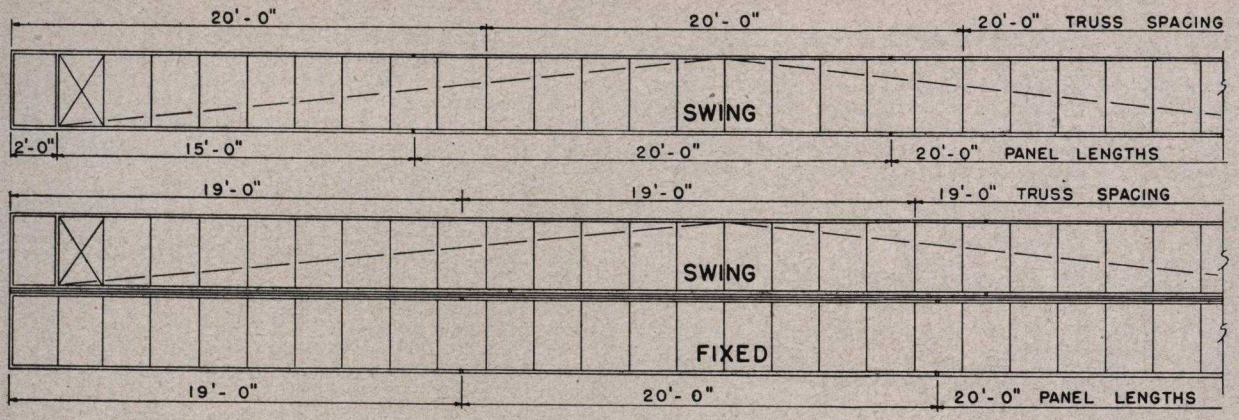
ERECTION—All windows shall be erected by the Ceco Steel Products Corporation, in openings prepared by others. All windows shall be set plumb and true, properly aligned and securely anchored before glazing. (Note: Sheet metal flashing at heads, sills and ends of runs is not furnished by the window manufacturer, and should be provided for in the Roofing and Sheet Metal Specifications.)

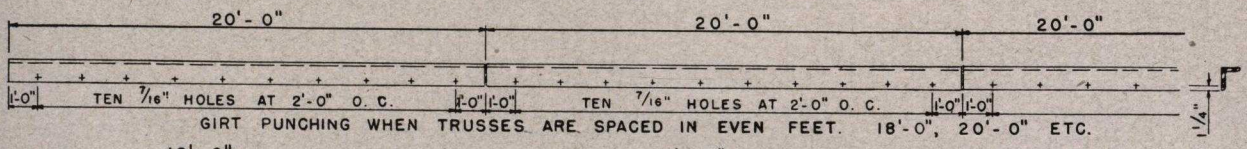
BONDERIZING AND PAINTING — All windows shall be Bonderized and receive one coat of gray paint, oven-dried, before shipment.

GLASS AND GLAZING—(Note: Glass and glazing should be furnished under glass and glazing specifications and not as part of window specifications.) All windows shall be glazed from the outside, all glass being set in a bed of putty and secured by angle clips furnished by the window manufacturer.

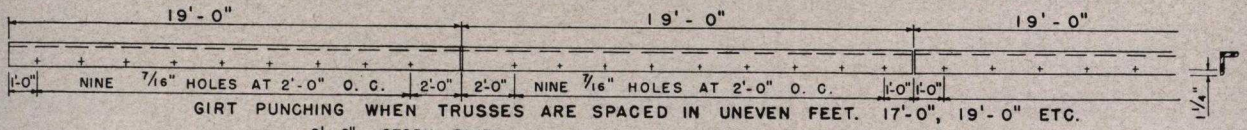
Face putty shall be applied in a neat, clean-cut, smooth manner. Putty shall be a high grade of steel window putty. Glass shall be ¼" wire.

CONTINUOUS FIXED WINDOWS—(Note: The specifications for Continuous Fixed Windows are the same as that for Continuous Top Hung Windows, except that all windows units are stationary—no swing sections. Heavy steel angle clips riveted to the window head and bolted to the building girt are substituted for the butts. Steel sill clips, furnished with the window and shipped flat, are bolted to the sill of the window and bent around the steel sill girts to rigidly secure the window in position at the bottom.)

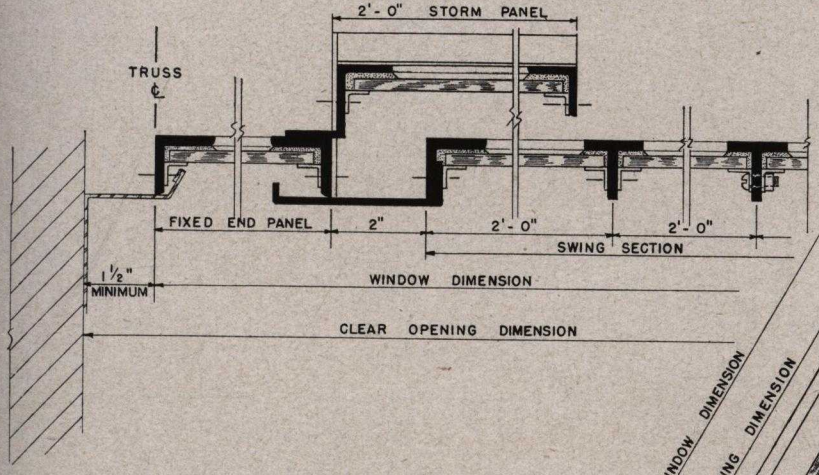


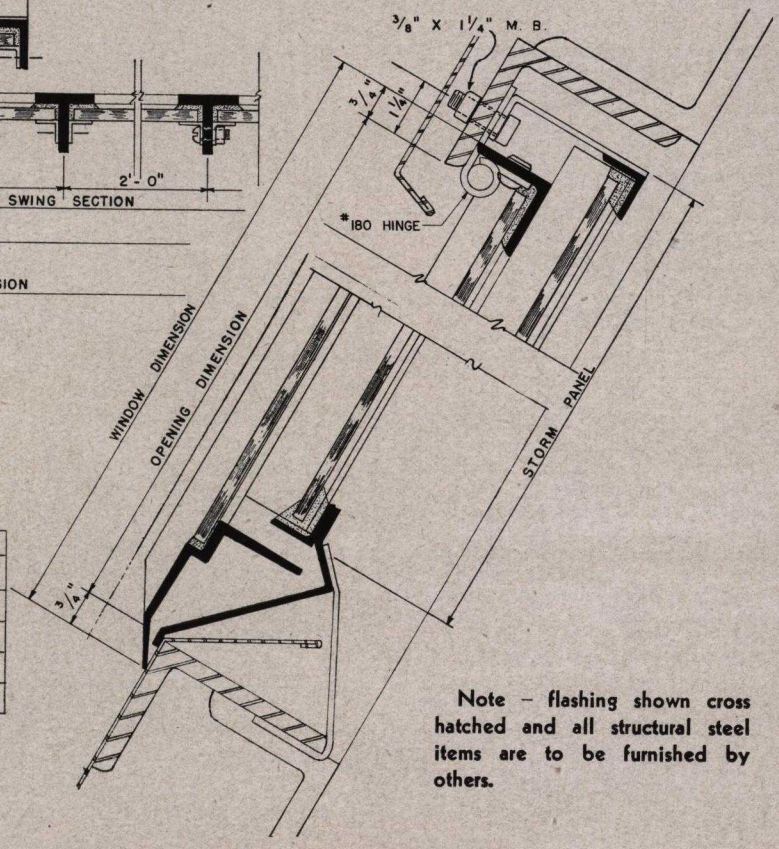


GIRT PUNCHING WHEN TRUSSES ARE SPACED IN EVEN FEET. 18'-0", 20'-0" ETC.



GIRT PUNCHING WHEN TRUSSES ARE SPACED IN UNEVEN FEET. 17'-0", 19'-0" ETC.

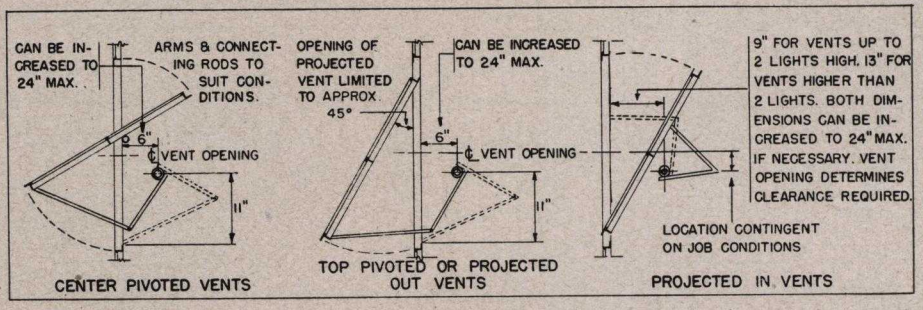




OPENING HEIGHT	WINDOW HEIGHT	GLASS SCHEDULE	
		FIXED END PANEL LIGHTS	CENTER & STORM PANEL LIGHTS
2'-10 1/2"	3'-0"	21 3/8" X 32 1/2"	23 1/2" X 32 1/2"
3'-10 1/2"	4'-0"	21 3/8" X 44 1/2"	23 1/2" X 44 1/2"
4'-10 1/2"	5'-0"	21 3/8" X 56 1/2"	23 1/2" X 56 1/2"
5'-10 1/2"	6'-0"	21 3/8" X 68 1/2"	23 1/2" X 68 1/2"

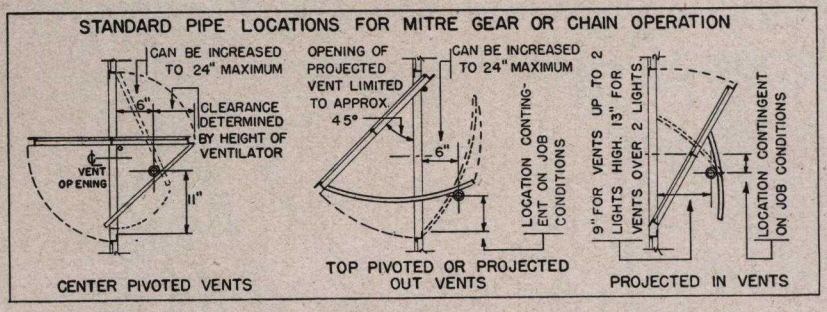
Note – flashing shown cross hatched and all structural steel items are to be furnished by others.

WORM AND GEAR TYPE OPERATORS—Operator is used for rapid control of short runs of horizontally pivoted, top or bottom pivoted or projected ventilators. Also used on short runs of casements by providing swivel joints in the connecting arm member. Powers are furnished in either the Open or the Oil enclosed type. Power consists of a worm actuating a segmental gear securely fastened to the shafting. The rotating motion of the shaft is transmitted to the ventilator by means of lever arms together with connecting rods and steel sash plates. Control may be of the endless chain, horizontal or vertical handwheel or detachable pole type. When vertical handwheel control is desired a mitre gear unit is used at the lower end of the vertical shaft. Several rows of vents may be controlled in unison. Control is always manual. See table below for limits.


CAN BE INCREASED TO 24" MAX.
ARMS & CONNECTING RODS TO SUIT CONDITIONS.
6"
℄ VENT OPENING
11"
CENTER PIVOTED VENTS
OPENING OF PROJECTED VENT LIMITED TO APPROX. 45°
CAN BE INCREASED TO 24" MAX.
6"
℄ VENT OPENING
11"
TOP PIVOTED OR PROJECTED OUT VENTS
9" FOR VENTS UP TO 2 LIGHTS HIGH. 13" FOR VENTS HIGHER THAN 2 LIGHTS. BOTH DIMENSIONS CAN BE INCREASED TO 24" MAX. IF NECESSARY. VENT OPENING DETERMINES CLEARANCE REQUIRED.
LOCATION CONTINGENT ON JOB CONDITIONS
PROJECTED IN VENTS

LIMITS OF SASH AND OPERATOR						
SINGLE RUN		DOUBLE RUN		TRIPLE RUN		
NUMBER OF VENTS EITHER OR BOTH SIDES OF POWER	LENGTH OF PIPE EITHER OR BOTH SIDES OF POWER	NUMBER OF VENTS PER RUN, EITHER OR BOTH SIDES OF POWER	LENGTH OF PIPE PER RUN, EITHER OR BOTH SIDES OF POWER	NUMBER OF VENTS PER RUN, ONE SIDE ONLY OF POWER	LENGTH OF PIPE PER RUN, ONE SIDE ONLY OF POWER	
8	50'	4	25'	3	20'	

RACK AND PINION TYPE OPERATORS—Operator is designed to control long runs of horizontally pivoted, top or bottom pivoted or projected vents and short runs of continuous windows. Equipment is the same as the Worm and Gear type with two exceptions, the power is provided with a full gear instead of segment, and motion of the horizontal shaft is transmitted to the vents by means of racks and pinions instead of lever arms. Racks can be provided in straight, concave or convex types. The curved types are desirable where clearance is vitally important as they are adaptable to "close in" installations. Controls of same types furnished for Worm and Gear operators except Rack and Pinion type may be electrically controlled. See table below.


STANDARD PIPE LOCATIONS FOR MITRE GEAR OR CHAIN OPERATION
CAN BE INCREASED TO 24" MAXIMUM
6"
CLEARANCE DETERMINED BY HEIGHT OF VENTILATOR
℄ VENT OPENING
11"
CENTER PIVOTED VENTS
OPENING OF PROJECTED VENT LIMITED TO APPROX. 45°
CAN BE INCREASED TO 24" MAXIMUM
6"
LOCATION CONTINGENT ON JOB CONDITIONS
TOP PIVOTED OR PROJECTED OUT VENTS
9" FOR VENTS UP TO 2 LIGHTS HIGH. 13" FOR VENTS OVER 2 LIGHTS
LOCATION CONTINGENT ON JOB CONDITIONS
PROJECTED IN VENTS

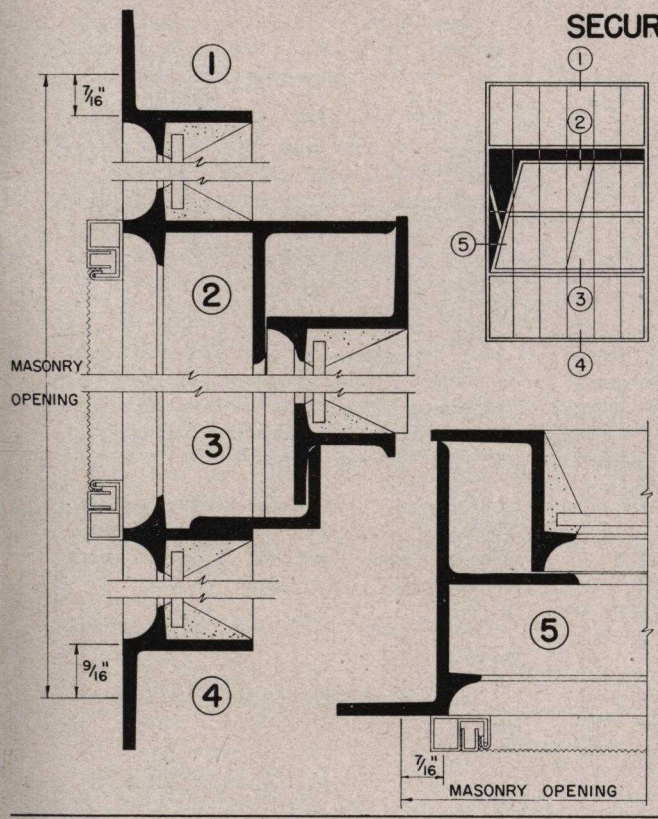
TYPE OF VENTS	OPERATION M=MANUAL E=ELECTRIC	LIMITS OF SASH					
		SINGLE RUN		DOUBLE RUN		TRIPLE RUN	
		NUMBER OF VENTS EITHER OR BOTH SIDES OF POWER	LENGTH OF PIPE EITHER OR BOTH SIDES OF POWER	NUMBER OF VENTS PER RUN, EITHER OR BOTH SIDES OF POWER	LENGTH OF PIPE PER RUN, EITHER OR BOTH SIDES OF POWER	NUMBER OF VENTS PER RUN, EITHER OR BOTH SIDES OF POWER	LENGTH OF PIPE PER RUN, EITHER OR BOTH SIDES OF POWER
CENTER PIVOT	M	15	80'	8	40'	5	26'
	E	25	150'	12	100'	8	100'
PIVOT FROM TOP	M	10	50'	5	25'	4	18'
	E	25	150'	12	100'	8	100'
PROJECT OUT OR IN	M	10	50'	5	25'	4	18'
	E	CONSULT MFG. DIV.					

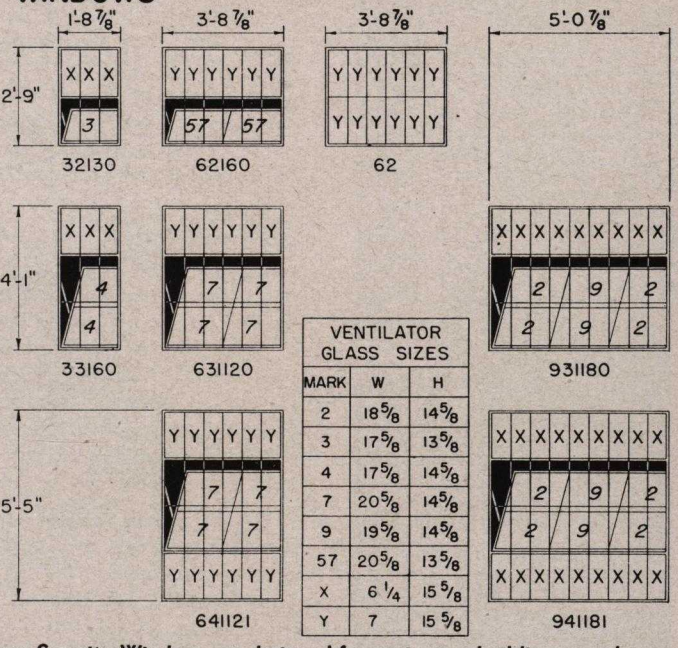
CONTINUOUS OR TENSION TYPE OPERATORS—Designed to control long runs of Ceco Continuous Windows of either the vertical or sloping type. Horizontal shaft moves laterally and is connected to the window by means of lever or scissor type arms which open or close the windows as the shafting moves horizontally. Shaft brackets are of the roller type and rollers are provided with brass roller sleeves to prevent corrosion. All moveable points in arms are provided with brass washers. Horizontal shafting is of standard 1" pipe and is connected in the field by rod stub connections. Motion is imparted to the horizontal shaft by means of heavy rack and pinion unit contained in a specially designed worm and gear operating power. Control may be of either the endless chain type or electrically controlled. See table.

LIMITS OF OPERATED RUNS				
HEIGHT OF SASH	PIPE BACK	SASH UP TO 30° OFF VERTICAL		
		WITH 11½" CHAIN WHEEL	WITH 19½" CHAIN WHEEL	ELECTRICAL OPERATION
3'-0"	18"	110'-0"	150'-0"	300'-0"
3'-0"	21"	140'-0"	200'-0"	300'-0"
4'-0"	18"	90'-0"	125'-0"	250'-0"
4'-0"	21"	100'-0"	150'-0"	290'-0"
5'-0"	18"	65'-0"	100'-0"	190'-0"
5'-0"	21"	80'-0"	120'-0"	230'-0"
6'-0"	18"	55'-0"	75'-0"	150'-0"
6'-0"	21"	65'-0"	90'-0"	180'-0"

SCREW TYPE OPERATORS—Ceco Screw Type Operators have been especially designed to handle large groups of vents such as occur frequently in Power Houses and similar types of buildings. Vents may be of the horizontally pivoted, top or bottom pivoted or the projected types. Control is of the manual type with vertical handwheel. As many as twenty vents may be handled with each operator. Rack and pinions can be provided with explosion type feature permitting free operation of vents in the event of explosion. This feature is special and Home Office must be consulted for all installations. For other special operator conditions consult Ceco representative.

SECURITY WINDOWS

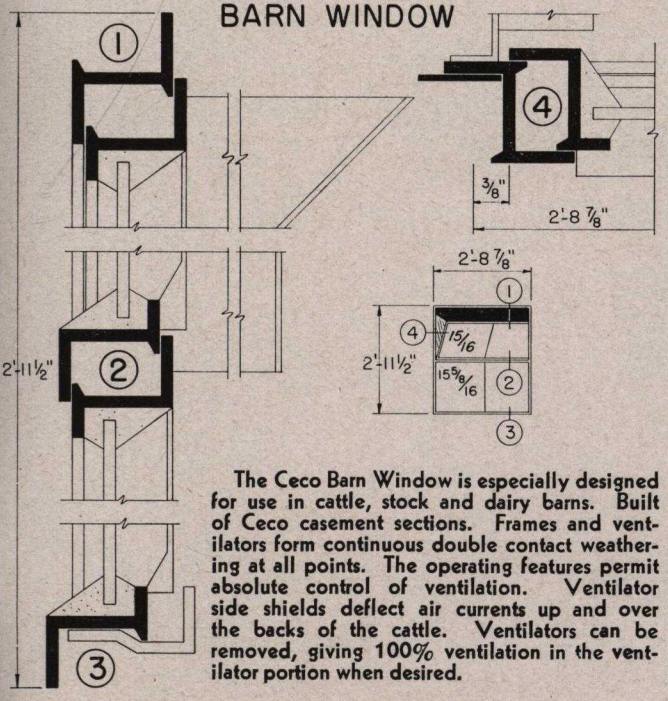




VENTILATOR GLASS SIZES		
MARK	W	H
2	18 5/8	14 5/8
3	17 5/8	13 5/8
4	17 5/8	14 5/8
7	20 5/8	14 5/8
9	19 5/8	14 5/8
57	20 5/8	13 5/8
X	6 1/4	15 5/8
Y	7	15 5/8

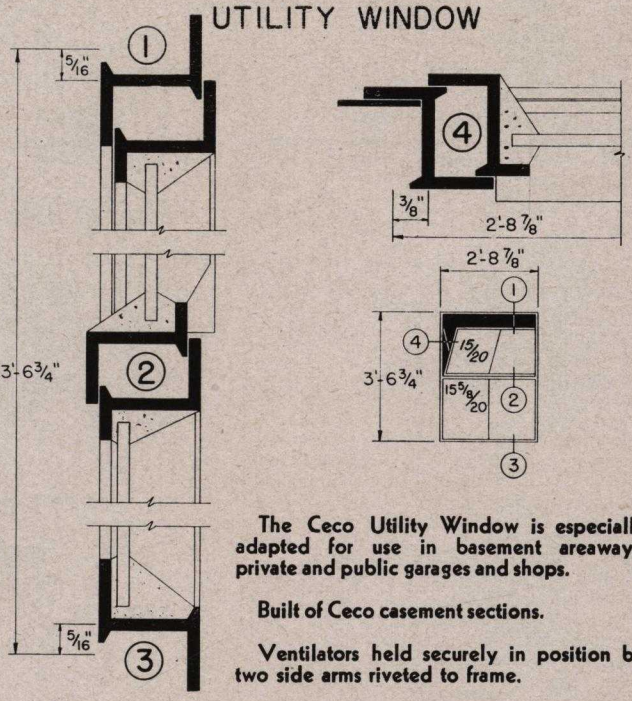
Ceco Security Windows are designed for use in store buildings, warehouses and other buildings where adequate ventilation is required and burglary protection is of importance. The security window is a ventilated window and guard combined in one unit. The ventilator weathers with a two point flat contact at head, sill and jambs. Grille openings in front of ventilator are left unglazed.

BARN WINDOW



The Ceco Barn Window is especially designed for use in cattle, stock and dairy barns. Built of Ceco casement sections. Frames and ventilators form continuous double contact weathering at all points. The operating features permit absolute control of ventilation. Ventilator side shields deflect air currents up and over the backs of the cattle. Ventilators can be removed, giving 100% ventilation in the ventilator portion when desired.

UTILITY WINDOW

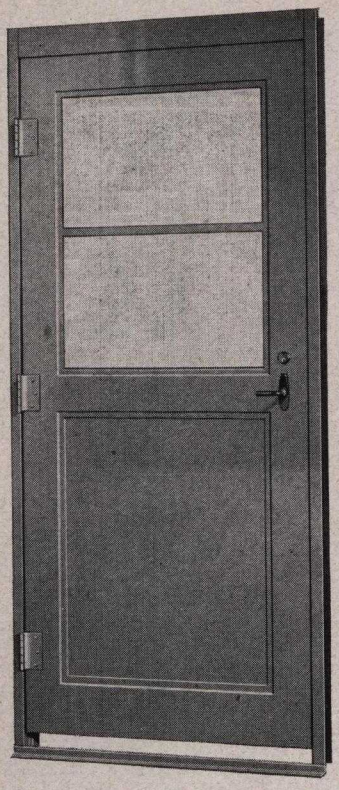


The Ceco Utility Window is especially adapted for use in basement areaways, private and public garages and shops.

Built of Ceco casement sections.

Ventilators held securely in position by two side arms riveted to frame.

CECO STEEL PRODUCTS CORPORATION



CECO SWING DOOR

Ceco swing and slide doors are designed with particular emphasis on appearance, durability, ease of operation, and secure locking. Ceco doors are fire-resisting, do not warp, swell or rot. They are highly adaptable for service entrances in all types of commercial, industrial and public buildings. They may be single or double, swing or slide. Slide doors are designed for inside installation.

Stiles and rails are of No. 16 gauge steel formed into tubes, 1-¾″ x 5″. Joints are securely welded and ground smooth. Reinforcements provided where necessary. Plate panels are No. 16 gauge steel spot welded to rails. Muntins are No. 18 gauge formed steel sections, securely welded to door rails forming an integral part of the door. Continuous glazing angles mitred at corners are securely held in place by screws. Doors are built to accommodate ¼″ glass.

No. 14 gauge pressed steel frames are available for single and double swing doors, up to and including 7′ 0″ high. Frames are formed with a self-contained rebate acting as door stop.

Ceco swing doors and frames are factory machined to accommodate standard Ceco hardware. Structural frames may be used for swing doors, but such frames will not be furnished or machined by door manufacturer. Frames not supplied for slide doors.

Standard hardware includes: For swing doors—steel butts and (for double doors) chain and foot bolts. For slide doors—track equipment, hasp and staple, hand pulls, door guides and stops. Available for swing doors at extra cost are lever latch, door checks, ball bearing butts, anti-panic hardware, and cylinder locks (master keyed if desired).

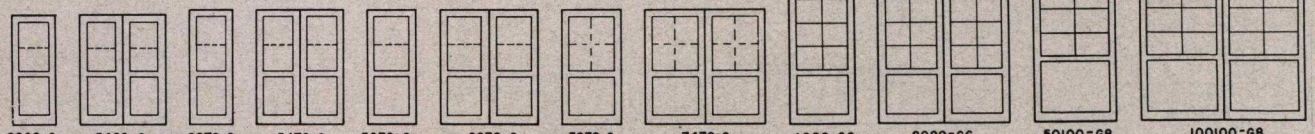
All hardware, including cylinder locks, is attached by machine screws threaded into re-inforced tapped holes or through bolted. No hardware or hardware trim is attached to No. 16 gauge metal only.

Swing and slide doors are shipped with hardware unattached. Frames are shipped knocked down. Doors and frames are painted one coat of paint at factory.

Ceco does not furnish glass, putty or calking compound.

Stock sizes and types of doors are illustrated below.

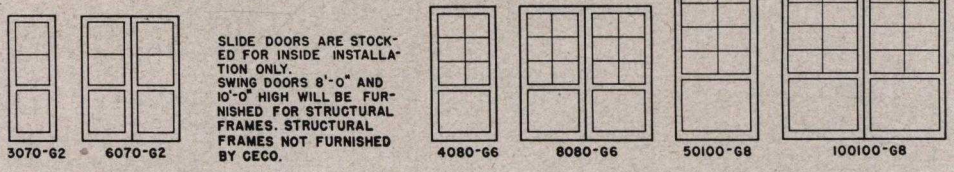
SWING DOORS



2868-G, 2868-G2, 2868-M | 5468-G, 5468-G2, 5468-M | 2870-G, 2870-G2, 2870-M | 5470-G, 5470-G2, 5470-M | 3070-G, 3070-G2, 3070-M | 6070-G, 6070-G2, 6070-M | 3870-G, 3870-G4, 3870-M | 7470-G, 7470-G4, 7470-M | 4080-G6 | 8080-G6 | 50100-G8 | 100100-G8

SLIDE DOORS

KEY TO DOOR NOMENCLATURES
DIGITS AT LEFT OF DASH INDICATES NOMINAL DOOR SIZE. LETTER "M" INDICATES BOTH PANELS ARE METAL. LETTER "G" INDICATES LOWER PANEL IS METAL AND UPPER PANEL GLASS. LAST DIGIT INDICATES NUMBER OF LIGHTS INTO WHICH PANEL IS DIVIDED.
DOORS ARE ALWAYS HANDED WHEN FACING THE EXTERIOR SIDE OF THE DOOR AND THE OUTSIDE OF THE OPENING.

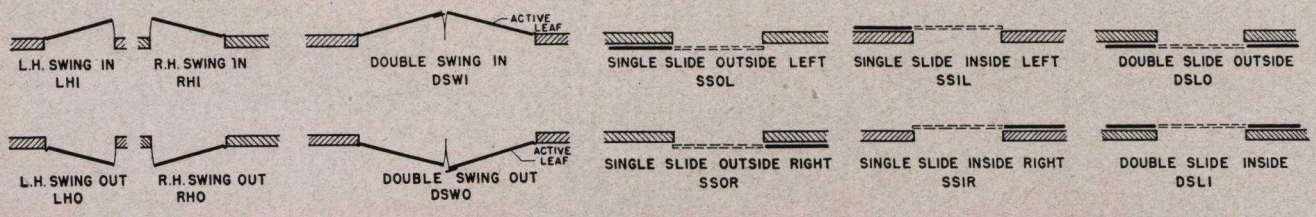


3070-G2 | 6070-G2

SLIDE DOORS ARE STOCKED FOR INSIDE INSTALLATION ONLY. SWING DOORS 8'-0" AND 10'-0" HIGH WILL BE FURNISHED FOR STRUCTURAL FRAMES. STRUCTURAL FRAMES NOT FURNISHED BY CECO.

4080-G6 | 8080-G6 | 50100-G8 | 100100-G8

HANDING DIAGRAMS

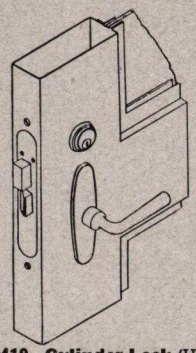


L.H. SWING IN LHI | R.H. SWING IN RHI | DOUBLE SWING IN DSWI | SINGLE SLIDE OUTSIDE LEFT SSOL | SINGLE SLIDE INSIDE LEFT SSIL | DOUBLE SLIDE OUTSIDE DSLO

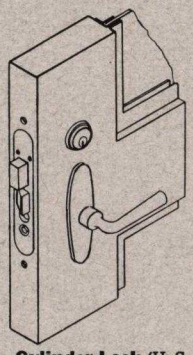
L.H. SWING OUT LHO | R.H. SWING OUT RHO | DOUBLE SWING OUT DSWO | SINGLE SLIDE OUTSIDE RIGHT SSOR | SINGLE SLIDE INSIDE RIGHT SSIR | DOUBLE SLIDE INSIDE DSLI

Types and sizes approved by METAL WINDOW INSTITUTE

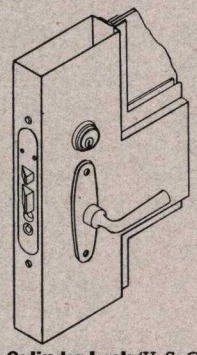
SWING DOOR HARDWARE



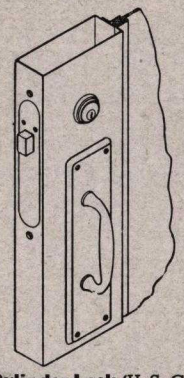
D410—Cylinder Lock (U. S. Gov't. #93) with latch and dead bolt. Latch bolt operated from both sides by handles. Dead bolt operated from outside by key, inside by thumb turn.



D412—Cylinder Lock (U. S. Gov't. #88) with stop works, latch bolt and dead bolt. Latch bolt operated from both sides by handles. Outside handle locked by stops, unlocked by outside key. Dead bolt from inside by thumb turn. Both bolts from outside by key.

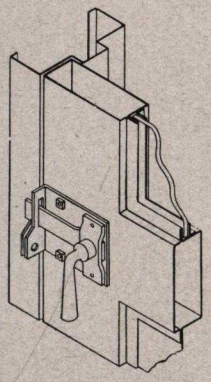


D419—Cylinder Lock (U. S. Gov't. #97) with stop works, latch bolt and auxiliary bolt. Latch bolt operated from both sides by handles. Outside handle locked by stops, unlocked by key. Auxiliary bolt deadlocks latch bolt to prevent picking.

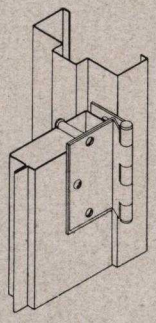


D416—Cylinder Lock (U. S. Gov't. #114) with dead bolt only. Dead bolt operated from outside by key, inside by thumb turn. Always specify whether Push and Pull Plates are required with lock set.

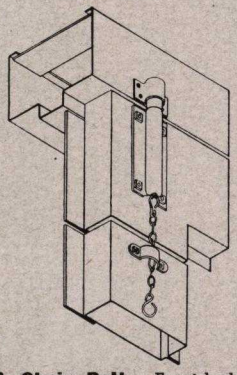
Note: Standard finish — Lock fronts, strikes, and key cylinders, bronze US 10 finish. Escutcheons and lever handles in black finish. Available finish, bronze US 10 throughout. Knobs may be substituted for lever handles.



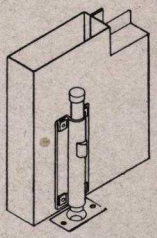
DO638—Lever Latch. Operated from both sides by handles. Padlock brackets applied on hinge side of door. (Padlock not by Ceco.) Primed for finish painting.



DO401—Hinge. 4½" x 4½" half surface loose pin heavy solid steel hinge. Made to template, primed for finished painting.

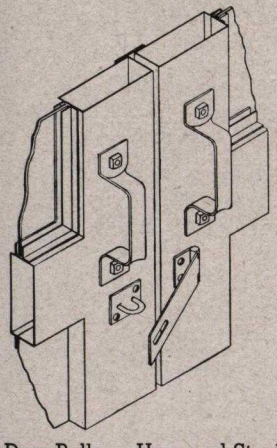


DO633—Chain Bolt. Furnished on inactive leaf of double swing doors. Cadmium plated.

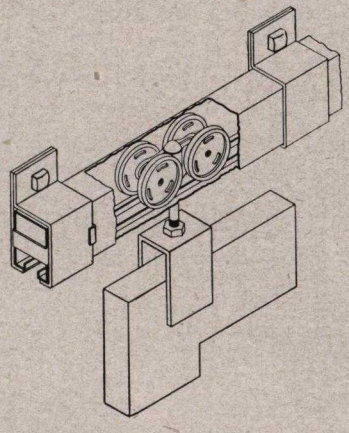


DO634—Spring Foot Bolt. Furnished on inactive leaf of double swing doors. Cadmium plated.

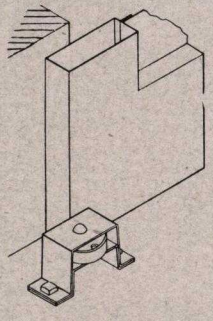
SLIDE DOOR HARDWARE



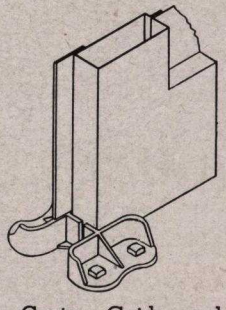
Door Pulls — Hasp and Staple for double doors. (Single doors similar.)



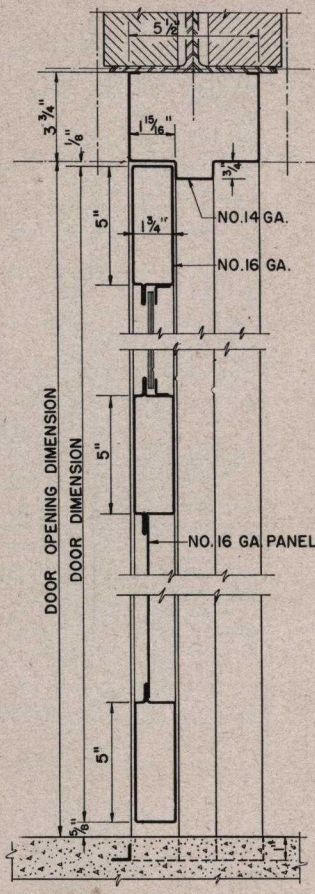
Four Wheel Trolleys. With lubricated roller bearings.



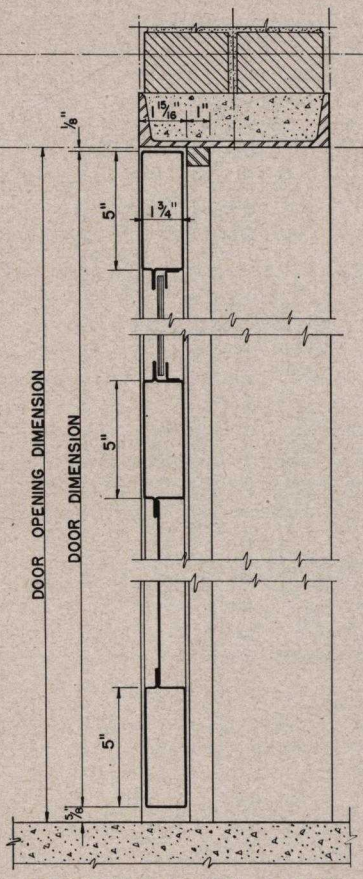
D622 — Floor Guide Roller for single and double doors.



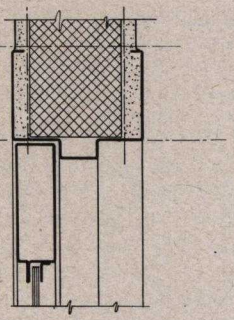
D623 — Center Guide and Stop for double doors.



PRESSED STEEL FRAME



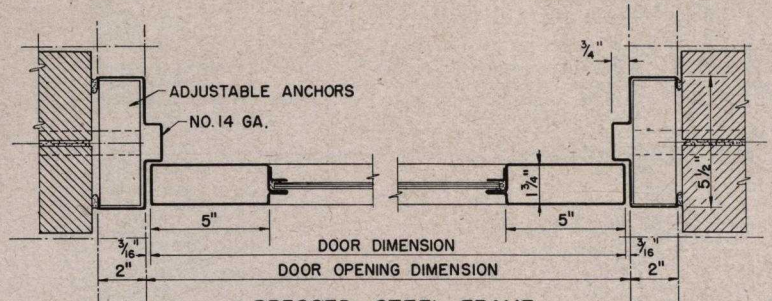
STRUCTURAL STEEL FRAME



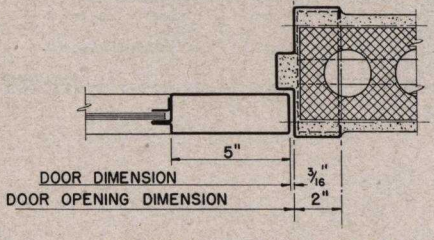
PRESSED STEEL FRAME
TILE WALL

DOOR	DOOR SIZE		DOOR OPENING		GLASS
	WIDTH	HEIGHT	WIDTH	HEIGHT	SIZE
SINGLE SWING					
2868	2'-7 5/8"	6'-7 1/4"	2'-8"	6'-8"	21 3/8" x 16"
2870	2'-7 5/8"	6'-11 1/4"	2'-8"	7'-0"	21 3/8" x 18"
3070	2'-11 5/8"	6'-11 1/4"	3'-0"	7'-0"	25 3/8" x 18"
3870	3'-7 5/8"	6'-11 1/4"	3'-8"	7'-0"	16 3/8" x 18"
* 4080	3'-11 5/8"	7'-11 1/4"	4'-0"	8'-0"	18 3/8" x 15 7/8"
* 50100	4'-11 5/8"	9'-11 1/4"	5'-0"	10'-0"	24 3/8" x 15 3/4"
DOUBLE SWING					
5468	5'-3 5/8"	6'-7 1/4"	5'-4"	6'-8"	21 3/8" x 16"
5470	5'-3 5/8"	6'-11 1/4"	5'-4"	7'-0"	21 3/8" x 18"
6070	5'-11 5/8"	6'-11 1/4"	6'-0"	7'-0"	25 3/8" x 18"
7470	7'-3 5/8"	6'-11 1/4"	7'-4"	7'-0"	16 3/8" x 18"
* 8080	7'-11 5/8"	7'-11 1/4"	8'-0"	8'-0"	18 3/8" x 15 7/8"
* 100100	9'-11 5/8"	9'-11 1/4"	10'-0"	10'-0"	24 3/8" x 15 3/4"

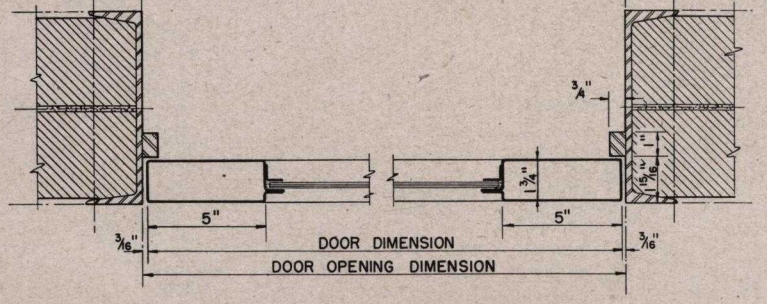
*TO BE USED WITH STRUCTURAL FRAMES ONLY.
STRUCTURAL FRAMES NOT FURNISHED BY CECO.



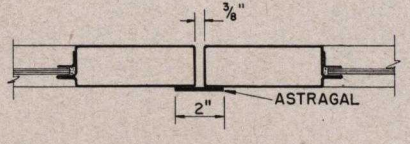
PRESSED STEEL FRAME



PRESSED STEEL FRAME
TILE WALL



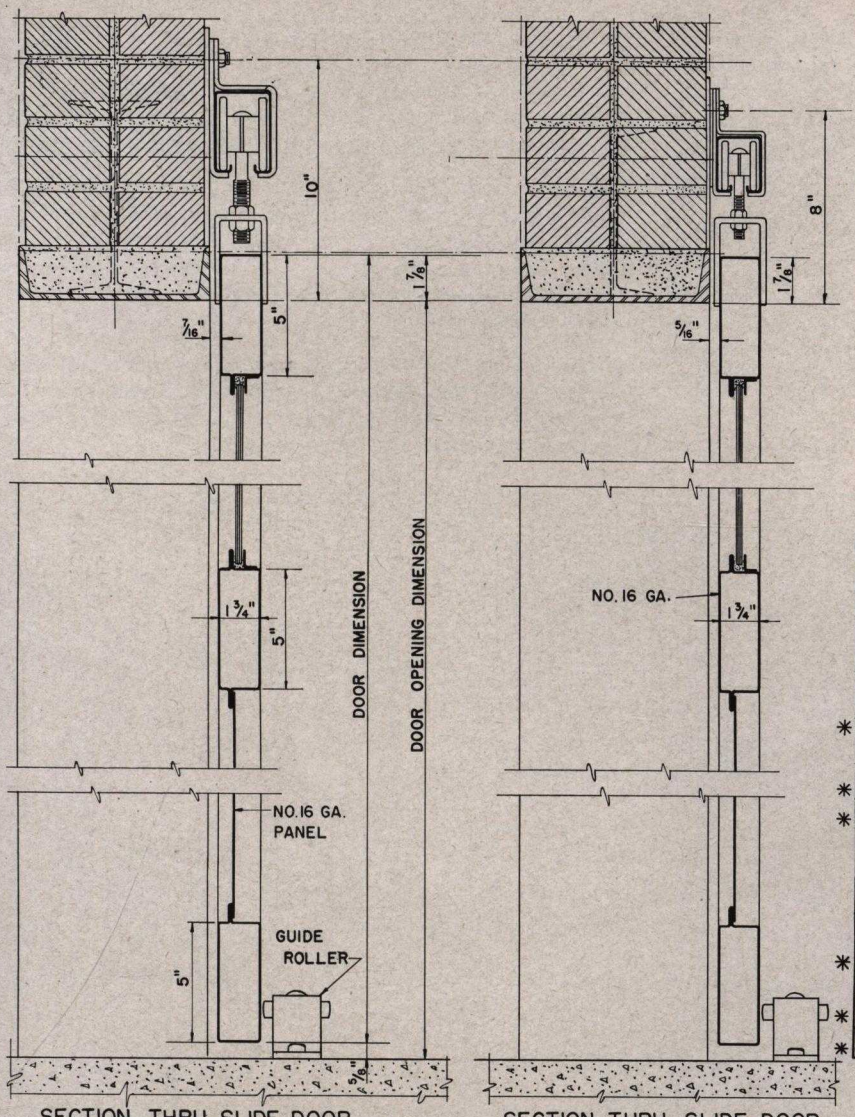
STRUCTURAL STEEL FRAME



ASTRAGAL FOR DOUBLE DOORS

Types and sizes approved by METAL WINDOW INSTITUTE

ENGINEERING MAKES THE BIG DIFFERENCE IN CECO CONSTRUCTION PRODUCTS



SECTION THRU SLIDE DOOR
NO'S. 4080, 50100, 8080 AND 100100

SECTION THRU SLIDE DOOR
NO'S 2868, 2870, 3070, 3870, 5468, 5470, 6070, AND 7470

NOTE

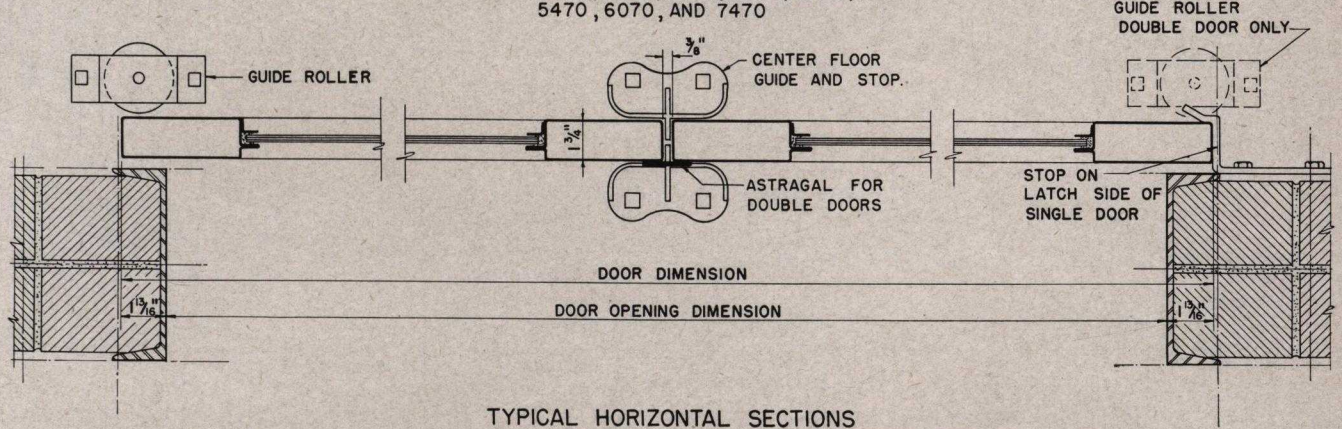
INSIDE INSTALLATION SHOWN. OUTSIDE INSTALLATIONS SHOULD BE AVOIDED.

DOOR FRAMES NOT FURNISHED WITH DOORS

ATTACHMENT BOLT TEMPLATES FURNISHED UPON REQUEST.

	DOOR	DOOR SIZE		DOOR OPENING		GLASS
		WIDTH	HEIGHT	WIDTH	HEIGHT	SIZE
	SINGLE SLIDE					
	2868	2'-7 5/8"	6'-7 1/4"	2'-4"	6'-6"	21 3/8" x 16"
	2870	2'-7 5/8"	6'-11 1/4"	2'-4"	6'-10"	21 3/8" x 18"
*	3070	2'-11 5/8"	6'-11 1/4"	2'-8"	6'-10"	25 3/8" x 18"
	3870	3'-7 5/8"	6'-11 1/4"	3'-4"	6'-10"	16 3/8" x 18"
*	4080	3'-11 5/8"	7'-11 1/4"	3'-8"	7'-10"	18 3/8" x 15 7/8"
*	50100	4'-11 5/8"	9'-11 1/4"	4'-8"	9'-10"	24 3/8" x 15 3/4"
	DOUBLE SLIDE					
	5468	5'-3 5/8"	6'-7 1/4"	5'-0"	6'-6"	21 3/8" x 16"
	5470	5'-3 5/8"	6'-11 1/4"	5'-0"	6'-10"	21 3/8" x 18"
*	6070	5'-11 5/8"	6'-11 1/4"	5'-8"	6'-10"	25 3/8" x 18"
	7470	7'-3 5/8"	6'-11 1/4"	7'-0"	6'-10"	16 3/8" x 18"
*	8080	7'-11 5/8"	7'-11 1/4"	7'-8"	7'-10"	18 3/8" x 15 7/8"
*	100100	9'-11 5/8"	9'-11 1/4"	9'-8"	9'-10"	24 3/8" x 15 3/4"

* STOCK SIZES ONLY



TYPICAL HORIZONTAL SECTIONS

Types and sizes approved by METAL WINDOW INSTITUTE

Accordion doors are especially adaptable for use in extremely wide and high openings, as will be found in industrial buildings, railway shops, warehouses, garages, firehouses, etc. Standard construction consists of four leaves per opening. Leaves fold together vertically, and when in open position clear the jambs to give a full opening width. Free leaves are hung on trolleys from overhead track, and end leaves are hinged to door jamb. Doors require very little head room, and can be made to open in or out.

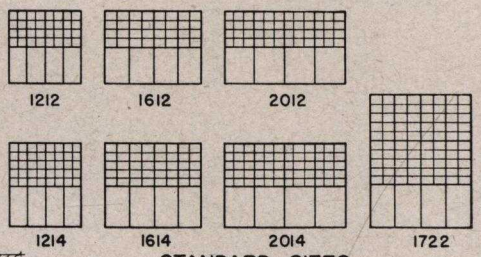
Accordion doors are easily and quickly operated by hand, but may be electrically operated where quick opening and closing with minimum heat loss is a consideration, as in service garages and firehouses. Electric operation applicable to in-swing doors only.

Door leaves are constructed of 2½" x 4" rolled steel tubes of No. 13 gauge minimum thickness. Corners are welded and ground smooth. Wainscot panels are of No. 14 gauge steel fillet welded to rails and stiles. Sash panels are fixed type industrial sash inserts welded to stiles and rails. Sash inserts may be omitted and No. 14 gauge steel panels substituted if desired.

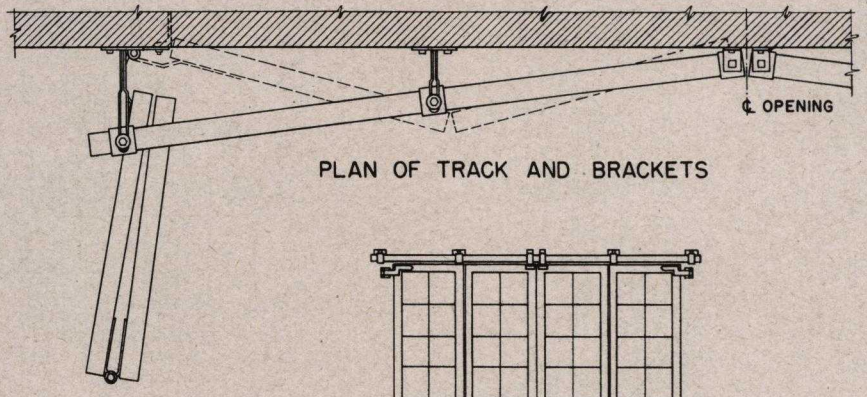
Astragals are welded to door leaves at the factory. All hardware is of heavy duty type to meet rough usage. Accordion doors are furnished with hinges, track, track brackets, trolleys, hasps, and staples, handpulls and cane bolts. Hardware is shipped unattached. Doors and hardware are painted one standard shop coat of paint at factory.

Door frames and stops, glass and glazing, flashing, track support plates, provision for attachment of hinges and track brackets not furnished by Ceco. Consult nearest Ceco representative for details, bolt templates, etc.

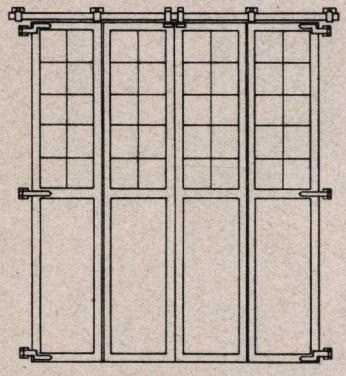
DOOR	DOOR SIZE		DOOR OPENING		LEAF SIZE		NO.	NO.	GLASS
	WIDTH	HEIGHT	WIDTH	HEIGHT	WIDTH	HEIGHT	BRACKET	HINGES	SIZE
1212	11'-11½"	11'-11"	12'-0"	12'-0"	2'-11⅝"	11'-11"	6	12	12¾" x 15⅝"
1612	15'-11½"	11'-11"	16'-0"	12'-0"	3'-11⅝"	11'-11"	8	12	18¾" x 15⅝"
2012	19'-11½"	11'-11"	20'-0"	12'-0"	4'-11⅝"	11'-11"	8	12	16½" x 15⅝"
1214	11'-11½"	13'-11"	12'-0"	14'-0"	2'-11⅝"	13'-11"	6	12	12¾" x 14⅞"
1614	15'-11½"	13'-11"	16'-0"	14'-0"	3'-11⅝"	13'-11"	8	12	18¾" x 14⅞"
2014	19'-11½"	13'-11"	20'-0"	14'-0"	4'-11⅝"	13'-11"	8	12	16½" x 14⅞"
1722	16'-11½"	21'-11"	17'-0"	22'-0"	4'-2⅝"	21'-11"	8	16	20¼" x 15⅜"



STANDARD SIZES

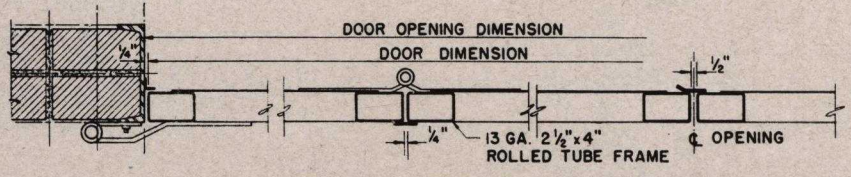


PLAN OF TRACK AND BRACKETS

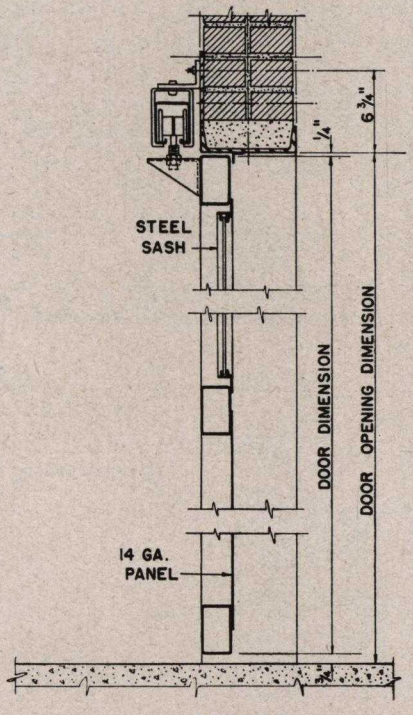


ATTACHMENT BOLT TEMPLATE FURNISHED UPON REQUEST

TYPICAL INSIDE ELEVATION



TYPICAL HORIZONTAL SECTION



TYPICAL VERTICAL SECTION

The Double Vertical Lift Door is the ideal door for all types of industrial buildings where sufficient head room above the lintel is available. The use of this door is highly recommended wherever multiple door construction is required, such as for piers and loading docks.

The construction and operation are simple, assuring ease and speed of operation with a minimum of maintenance expense. The door consists of two door leaves, each approximately one-half the height of opening, which operate parallel to each other in vertical guideways. Door leaves are counterweighted in such a manner that in opening, the lower and inside leaf rises at twice the speed of the upper and outer leaf, clearing head of opening at the same time. In full open position, the two leaves rest one in back of the other in a vertical position above the lintel, thus leaving a clear opening entirely free of projections either inside or outside the building. Door leaves are supported by flexible steel cables running over cast sheaves mounted on roller bearings, terminating at a single counterweight which balances both leaves. Cable sheaves are operated through a gear reducing unit to a hand chain or electric operator.

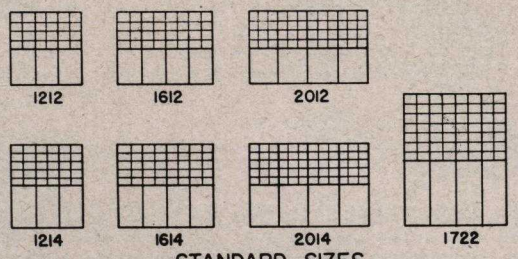
Manual operation is standard. Doors are manually operated by means of a continuous hand chain located inside the building at either jamb of opening. Electric operators available at extra cost.

Door leaves are constructed of 3" structural channels welded to form rigid framework. Exposed surfaces ground smooth. Upper leaf is fitted with fixed industrial window inserts welded in place. Lower leaf is covered with No. 14 gauge steel panel welded to rails and stiles. Flexible weather seals furnished at head and horizontal joint of doors.

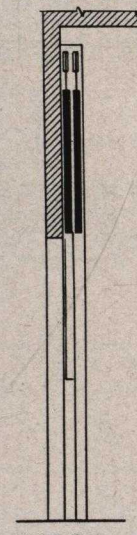
Doors, jambs, and hardware painted one standard coat of shop paint at factory. Glass, putty, glazing and finished painting not by Ceco.

DOOR	DOOR SIZE		DOOR OPENING		FRAME	GLASS
	WIDTH	HEIGHT	WIDTH	HEIGHT	CHANNEL	SIZE
1212	12'-2"	12'-1"	12'-0"	12'-0"	3"	22" x 16 7/8"
1612	16'-2"	12'-1"	16'-0"	12'-0"	3"	22 1/8" x 16 7/8"
2012	20'-2"	12'-1"	20'-0"	12'-0"	4"	18 5/8" x 16 7/8"
1214	12'-2"	14'-1"	12'-0"	14'-0"	3"	22" x 15 7/8"
1614	16'-2"	14'-1"	16'-0"	14'-0"	3"	22 1/8" x 15 7/8"
2014	20'-2"	14'-1"	20'-0"	14'-0"	4"	18 5/8" x 15 3/4"
1722	17'-2"	22'-1"	17'-0"	22'-0"	4"	23 5/8" x 18"

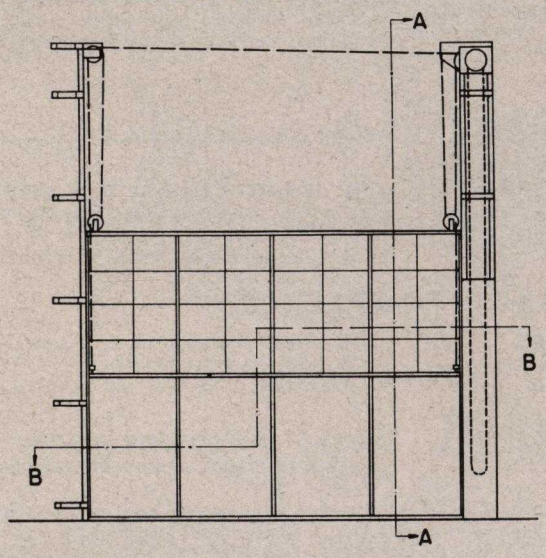
ATTACHMENT BOLT TEMPLATE FURNISHED UPON REQUEST



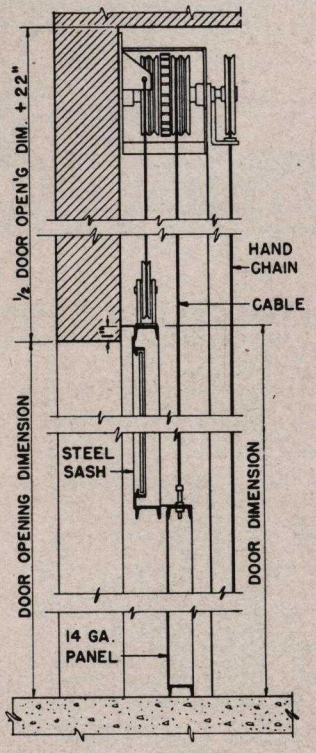
STANDARD SIZES



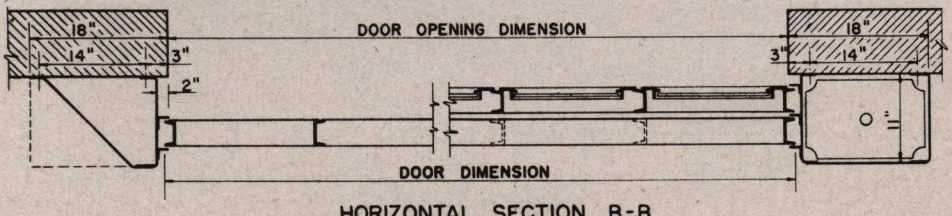
SECTION



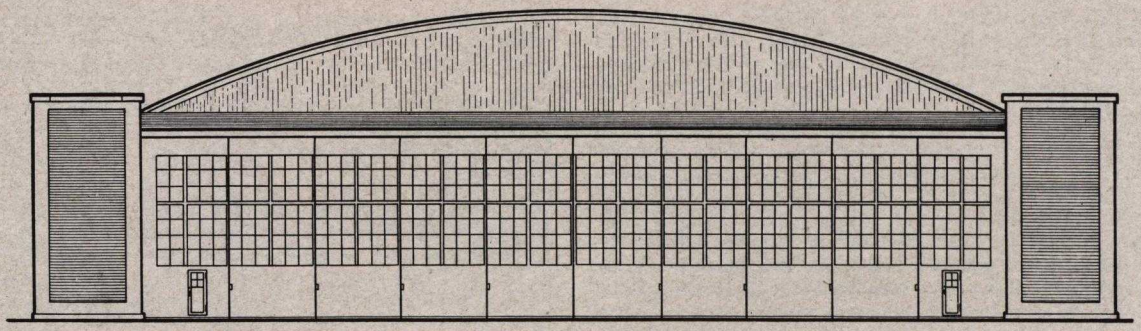
TYPICAL INSIDE ELEVATION



VERTICAL SECTION A-A



HORIZONTAL SECTION B-B



The most popular hangar door is the straight slide type consisting of separated door leaves moving horizontally on roller bearing wheels. Its popularity is due to its low cost as no heavy supporting trusses and columns are required as with overhead doors of comparable size. It also has the lowest maintenance cost of any type of hangar door.

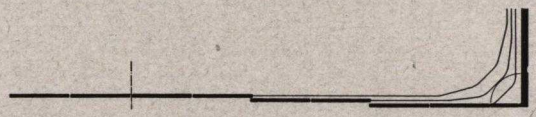
The door leaves are not connected which permits opening any one leaf, or partial opening of the door when necessary, minimizing heat loss.

The slide type door is adaptable to any size opening without limitation and in turn it imposes no limitation upon building design.

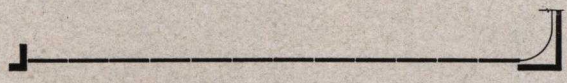
Each door is individually designed for its specific location requiring close cooperation between the building designer and the door manufacturer. Ceco maintains a staff of experienced door engineers who welcome consultation on door problems.

STRAIGHT SLIDE DOOR WITH RECESSES—Straight slide doors are generally used with door recesses or pockets. This arrangement of the door leaves places the bottom rails inside the building for protection against snow and ice. Any number of tracks and door leaves may be used.

STRAIGHT SLIDE DOOR WITHOUT RECESSES—This door and track arrangement is used where snow and ice are not a hazard and when maximum economy is desired. Any number of tracks and door leaves may be used.



ROUND THE CORNER SLIDE DOORS—Round the corner slide doors are used where recess or stacking space is not available for straight slide doors as in multiple hangers, test cells, etc.



TOP HUNG ROUND THE CORNER DOORS — This type of door is used in small openings not over 20' high. Doors may slide two ways from center or all to one side as shown. Top hung doors are also available on straight slide type of operation.

SPECIFICATIONS

FLOOR BEARING STRAIGHT SLIDE DOORS

1. **GENERAL**—The hangar doors shall be as manufactured by The Ceco Steel Products Corporation, Chicago, Illinois, or equal in design, materials, and workmanship.

The door manufacturer shall furnish the doors and all necessary hardware for a complete installation, except the top and bottom guides and supports, bottom rails and ties, glass and glazing, and finishing painting. The doors shall be installed by the door manufacturer with labor working under the supervision of a factory trained installation superintendent.

2. **DOOR CONSTRUCTION**—The doors shall be fabricated as shown on the plans, with frames of new billet steel with all joints coped and welded to the full strength of the member. The frames shall be square and free of twist and warp. All exposed welds shall be ground smooth. Wainscot and header plates shall be No. 14 Ga. steel sheet, welded to the door frame in a level plane. Steel sash shall be square and welded to the door frames at the corners and at each muntin bar. Sash shall be set in mastic and shall be furnished with glazing clips for inside putty glazing.

Weather seals shall be rubberized fabric approx. ⅛" thick attached to the doors as shown on the plans. The top horizontal seals shall be light guage metal bolted to the header plates.

Pilot doors shall be the Industrial type 1¾" thick hollow metal of No. 16 ga. steel, with upper panel arranged for glazing.

3. **DOOR HARDWARE**—Each door leaf shall be equipped with two top rollers having graphited bronze bushings, and two bottom rollers having Timken roller bearings and Zerk lubrication fittings. The lead bottom roller of each leaf shall be equipped with a locking brake. Each bottom roller shall be adjustable, shall have two oiled leather track wipers, and shall be removable from the door leaf without setting the door down. Each door leaf shall have two top bumpers of welded steel construction using springs or rubber block for bumper material; one cane bolt designed to operate without fouling the adjacent door leaf, and hand pulls located as shown on the plans.

Pilot doors shall be equipped with a latch and dead bolt with key cylinder outside and thumb latch inside, and shall be hung on two spring hinges.

4. **PAINTING** — The doors shall be factory primed with one coat of grey paint.

ROUND THE CORNER DOORS

1. **GENERAL AND DOOR CONSTRUCTION** — (See Straight Slide Door Specifications).

2. **DOOR HARDWARE AND DOOR OPERATION** — The doors shall slide on rails toward the jambs of the opening turning at right angles to rest parallel with the inside wall of the building in open position. The top guides and the bottom rails shall be so designed as to prevent the doors locking on the curves. Each door leaf shall have two top rollers of the split type, graphite bronze bushed; bumpers of block rubber mounted on top roller frames; two bottom rollers, swivel type, roller bearinged and adjustable with Alemite Lubrication fittings; one cane bolt, and hand pulls located as shown on the plans.

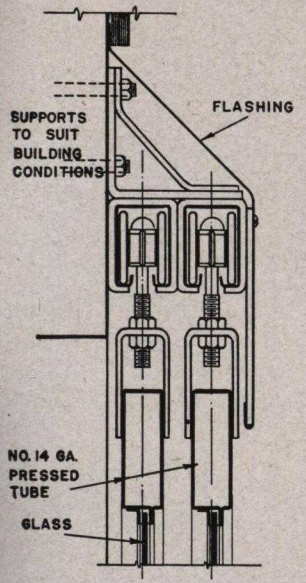
Swing doors at the jambs shall be fabricated similar to the main leaves, and shall be hung on heavy duty three knuckle hinges, with a chain bolt at the top and a cane bolt at the bottom. Each swing door shall contain the pilot door, when required, which shall be hung on two spring hinges, and shall have a latch and cylinder keyed dead bolt.

3. **PAINTING** — (See Straight Slide Door Specifications).

TOP HUNG SLIDING DOORS

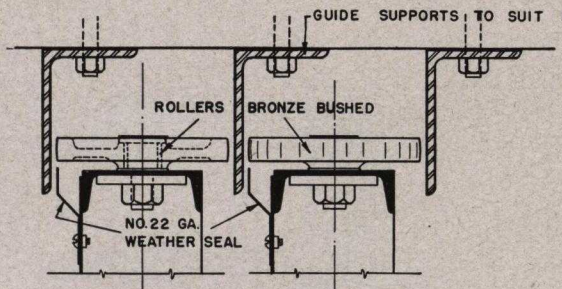
For specifications on Top Hung Pressed Tube Sliding Doors, see Industrial Sliding Door Specifications. Weatherseals may be added when desired.

Specifications for Top Hung Structural Frame Sliding Doors furnished upon application.



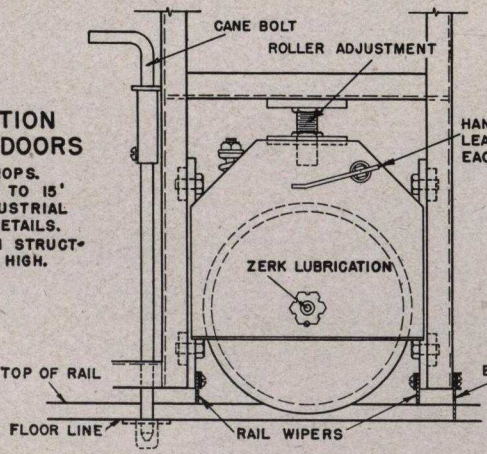
VERTICAL HEAD SECTION TOP HUNG SLIDING DOORS

FOR SMALL HANGARS AND SHOPS. OPENINGS ANY WIDTH AND UP TO 15' IN HEIGHT. SEE CECO INDUSTRIAL DOORS FOR CONSTRUCTION DETAILS. CAN ALSO BE FURNISHED IN STRUCTURAL FRAMES UP TO 20' HIGH.



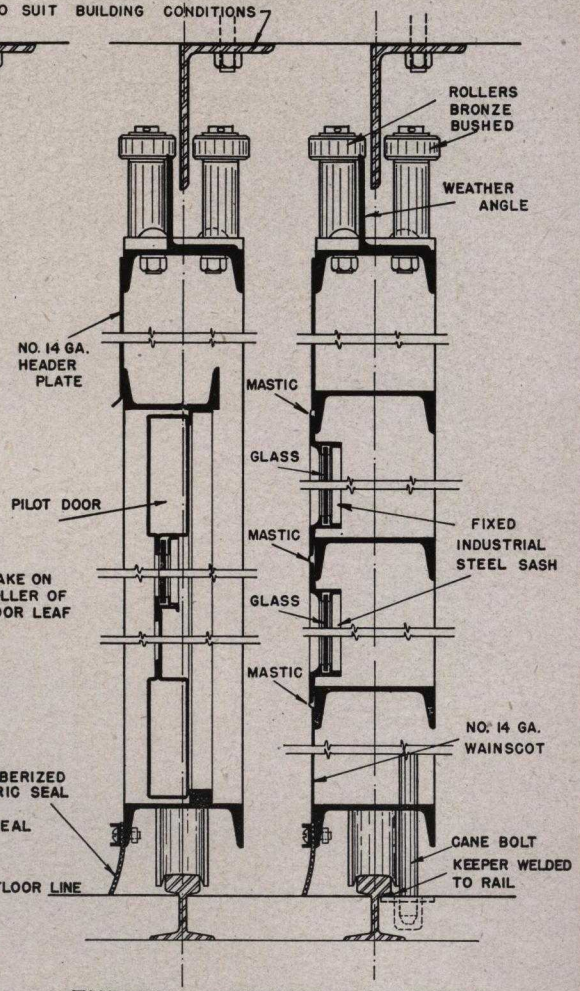
ALTERNATE HEAD SECTION WITH LARGE ROLLERS

STRUCTURAL CHANNEL DOOR
FLOOR BEARING
SCALE 1 ½" = 1'-0"



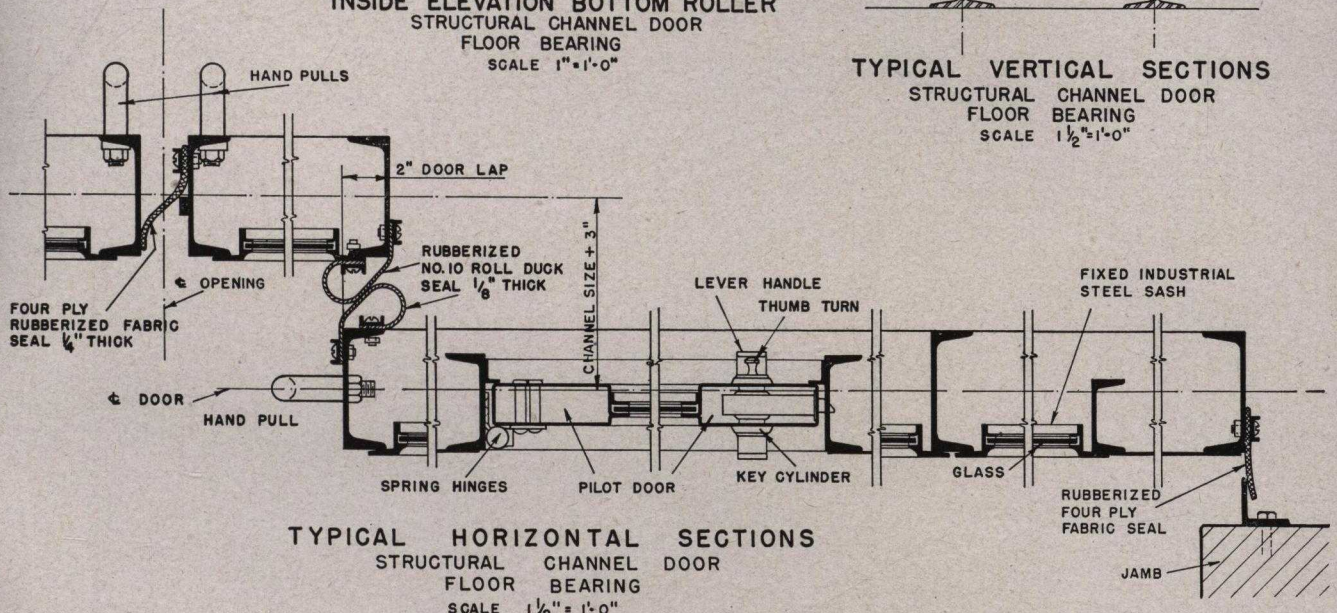
INSIDE ELEVATION BOTTOM ROLLER

STRUCTURAL CHANNEL DOOR
FLOOR BEARING
SCALE 1" = 1'-0"



TYPICAL VERTICAL SECTIONS

STRUCTURAL CHANNEL DOOR
FLOOR BEARING
SCALE 1 ½" = 1'-0"



TYPICAL HORIZONTAL SECTIONS

STRUCTURAL CHANNEL DOOR
FLOOR BEARING
SCALE 1 ½" = 1'-0"

CECO STEEL PRODUCTS CORPORATION

PARTIAL LIST OF OTHER CECO PRODUCTS

Metal Frame Screens • Metal Weatherstrips • Steel Joists, Steel Roof Deck • Metal Lath and Accessories • Meyer Steelforms, Concrete Reinforcing Bars, Welded Steel Fabric, Adjustable Shores, Column Clamps, Bar Chairs and Spacers • Highway Products • Corrugated Double-Drain Roofing and Accessories, Aluminum Roofing • Galvanized and Black Sheets • Conductor Pipe, Trough and Fittings • Ventilators • Nails and Wire, Netting and Fencing, Steel Posts • Ask for complete details

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Detroit 26, 600 Woodward Ave.
Houston 1, 2814 Pease Ave.
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